

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1487.—Vol. XXXIV.

LONDON, SATURDAY, FEBRUARY 20, 1864.

(WITH SUPPLEMENT) (STAMPED.....SIXPENCE. UNSTAMPED.....FIVEPENCE.)

MR. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
Mr. Crofts transacts business, in the way of PURCHASE or SALE, in every description of stocks, but particularly in BRITISH MINES, in no case departing from the position of a broker, at net prices. All orders meet with the utmost punctuality and zeal, and advice given as to the nature and eligibility of INVESTMENTS, when required, EXCHANGES OF STOCK effected on the most advantageous basis, subject only to one commission.
BUSINESS in Brynford Hall, Central Miners, Cefn Cileon, Redol-Aur, and Twelve Apostles.
*See Bazaar-Aur.—See Journal for notice of special meeting of shareholders. Improved report. Ore and "bwy" from the lode now developing in the pulley shaft for inspection, at the offices of the company, No. 3, Great St. Helen's.
BUYER of New Martha, East Grenville, Illogan.

MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.
JAMES LANE has FOR SALE, at net prices:—20 Buller and Basset (call paid), 10s.; 2 Buller, £41; 50 Crebor, 45s.; 20 Drake Walls; 50 East Jane, 38s.; 20 East Carn Brea, £7½; East Providence, £4½; 20 East Lovell; 20 East Russell, £4; 20 East Seton, 7s. 6d.; 50 Fuzze Hill Wood, 7s. 6d.; 50 Great Wheel Bush, £4½; 5 Gribbler and St. Aubyn, £10½; 50 Kelly Bray, 4s. 6d.; 50 Moland, 6d.; 20 New Wheel Martha, £1½; 50 North Miners, 11s.; 50 New Birch Tor and Vittier, £2½; 50 North Jane; 20 North Trekerby, £2; 50 Okel Tor; 3 South Frances, £5½; 20 Treworin, £2½; 10 Trelawny, £2½; 40 Wheel Croft, £2½; 50 Wheel Heale, 4s. 6d.; 20 Union, £3½; 10 Vigra and Clogau, £4½.

SHAREHOLDERS IN MINES AND CAPITALISTS
will do well to READ PETER WATSON'S "WEEKLY MINING CIRCULAR" of Friday, the 18th February (No. 909, Vol. 7). Price 6d. each copy (post paid). Forwarded on application. In this Circular there are four valuable mines mentioned which are certain to pay good dividends, and the price of shares greatly advanced.
79, Old Broad-street, London, E.C.

STOCK AND SHAREDEALER.—MR. PETER WATSON,
ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD-STREET, LONDON, E.C.
TELEGRAPHIC MESSAGES BUY or SELL Railway, Bank, Mine, and other Shares and Stocks, punctually attended to on commission, or at net prices for cash, or for fortnightly settlements, with advice as to purchases or sales.
Nineteen years' experience.
(Two in Cornwall and Seventeen in London.)

Bankers: Union Bank of London, and the Alliance Bank of London and Liverpool.
Every information can be obtained on personal application or by letter, as to purchases and sales of mine and other shares, and the best investment for capital.
From the close proximity of his Offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.—February 19, 1864.

PETER WATSON'S WEEKLY MINING CIRCULAR AND SHARE LIST, published every Friday, price 6d. each copy, forwarded on application. This Circular contains weekly important information with respect to all the principal dividend and progressive mines in Devon and Cornwall.
79, Old Broad-street, London, E.C.

MR. W. LEALAN, 11, ROYAL EXCHANGE, LONDON, E.C.
has the following SHARES FOR SALE, which he strongly recommends for investment or speculation:—20 Botalack, £287½; 100 Wheel Crebor, 44s. 9d. (call paid); 20 East Lovell; 1 Providence, £45; 5 Nanglies, £38½; 5 West Chiverton; 20 East Rosewarne; 15 Hington Down; 10 Derra Burns, £115; 10 Great Laxey, £2½; 5 New Rosewarne; 20 Prosper United; 50 Cuddra, 22s. 6d.
Shares bought and sold on the usual commission. Telegraphic messages promptly attended to. Mines inspected, and reliable information given. Established 15 years.
Bankers: Roberts, Lubbock, and Co.

MR. E. GOMPERS, MINING OFFICES,
3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
BUSINESS TRANSACTIONS IN BRITISH AND FOREIGN STOCKS AND SHARES.
Terms, 1¼ per cent.
Bankers: London and Westminster Bank.

WILLIAM ALLISON, STOCK, SHARE, AND MINING BROKER,
29, AUSTINFRIARS, LONDON, E.C.
Orders to buy or sell, accompanied by references, punctually attended to.

MR. WM. BIRDSEY, MINE AND SHAREBROKER,
No. 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED THIRTY-SIX YEARS.
W. BIRDSEY is always in a position to give the soundest advice in all mining matters, whether to buy or sell; and is a BUYER of the following shares, or any part:—500 Treloeth; 500 North Shepherds; and has business in St. Just United, Roaring Water Mines, and Penden Consols.

MR. WILLIAM MARLBOROUGH, 48, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following SHARES at net prices, for cash:—
25 Bryntall, £2½; 25 Wheel Crebor, 43s. 9d.; 10 Great Laxey, £2½; 100 Redol-Aur, 10s. 6d.; 20 Wh. Grenville, £5 11s.; 1 Nanglies, £38½; 20 East Lovell, £28; 50 East Russell, £4 18s. 9d.; 20 Prosper Utd., £7 1s. 3d.; N.B. Wheat Chiverton.—These shares have advanced 7s. 6d. per share since 1st recommended their purchase. I still advise their being bought while they are low, as they are certain to go to £8.
GREAT LAXEY shares should also be purchased. A dividend will be declared next month. Prospects are improving.

MR. J. W. GILBERT, (late of St. Day, Cornwall),
1, PINNERS COURT, OLD BROAD STREET.
Mr. GILBERT is in a position to give reliable information respecting Prosper United, East Wheel Lovell, Nanglies, Wheel Grenville, and Wheel Seton.
FOR SALE:—20 East Wheel Lovell, £8; 10 Prosper United, £7; 4 Seton, £183.
BUYER of 100 Wheel Grenville, £5 11s. 3d.
Mr. GILBERT is a SELLER of 20 New Rosewarne, two months on, at £10 per share.

MR. G. D. SANDY, SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C.
FOR SALE:—
40 E. Rosewarne, £2 13s. 9d.; 100 Redol-Aur, 10s. 6d.; 25 Camb. Vein, £2 13s. 9d.; 20 East Lovell, £8 3s. 9d.; 30 Wheel Crebor, 43s. 9d.; 10 Chiverton; 10 Great Bush, £4½; 10 Wh. Grenville, £5 3s. 9d.; 2 East Basset; 20 North Basset, £2 7s. 6d.; 10 Kitty (St. Ag.), £7 17s. 6d.; 20 East Carn Brea; 20 So. Grenville, 5s. 9d.; 10 Great South Tolgus; 50 East Grenville, £2 13s. 9d.; 50 St. Day United, 38s.; 10 Tolvadden.
A correct daily price list will be forwarded on application.
Business transacted at the closest market prices.

MR. J. M. SMITH, 38, THREADNEEDLE STREET,
strongly recommends Wheel Buller, Wheel Curtis, Wheel Croft, and Wheel Hartley among Progressive Mines; and East Pool, Wheel Seton, and West Seton among Dividend Mines.
J. M. SMITH's "Joint-Stock Companies Share Price List and Mining Circular" should be consulted by all interested in mining or commercial companies. Will be forwarded on application.

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.
MINES INSPECTED and faithfully REPORTED ON. DEALER IN MINING, RAILWAY, AND OTHER SHARES.
His monthly "Circular" for February contains a selected list of Cornish and other mines. Forwarded on receipt of six postage stamps.
38, Dowgate-hill Chambers, London, E.C.

MR. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 17 years), has FOR SALE at net prices:—30 North Buller; 100 Illogan, 16s.; 60 Kelly Bray, 10s.; 20 Bryntall, £2½; 25 Wheel Chiverton, £18½; 50 Gawton, 13s. 6d.; 30 Hington Down, £2½; 20 Great Bush, £4½; 3 Wheel Buller; 30 Grenville, £5½; 20 Wheel Curtis, £2½; 200 East Clogau (fully paid), 4s.; 25 Cape Copper, £28½; 20 Charlotte United, 12s. 6d.; 55 North Miners (Preference), 18s. 6d.; 100 Santa Barbara, 12s.; 75 Wheel Dale, 16s.; 50 Vallanassa; 200 Nanteos, 10s.; 200 Don Pedro North del Rey, 16s.; 120 East Seton, 7s.; 100 Nova Scotia (Gold); 100 Vale of Towry, 4s. 6d.; 50 West Maria and Fortescue; 85 Hawkmoor, 2s. 9d.; 150 Sparrow, 8s.; 70 Pedn-ar-drea; 2 Seton, £180; 250 Great Northern (Copper), 1s. 3d.; 100 West Trevelyan; 45 Okel Tor; 3 South Frances; 150 Anglo Brazilian, 8s. 9d.; 5 New Birch Tor and Vittier, 21s. 14s.; 60 Treveltha, 17s. 6d.; 130 Garreg; 25 Camborne Vein, £2½; 20 Treloeth; 7 Great Fortune, £20; 30 Bryntall; 50 East Wheel Ellen, £2½; 100 South Condurow; 100 Sovereign (Gold), 5s. 9d.; 30 Stithney and Carmel.

GEORGE MOORE,
1, CROWN COURT, THREADNEEDLE STREET.
In any business that GEORGE MOORE is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—
50 Australian and Eastern 5 Great Wh. Vor, £20 8s. 9d.
50 Glasgow Caradon, £23½.
60 Aberdwr, 12s. 9d.
3 Basset & Grylls, £16½.
10 Great Devon & Bedford.
10 Great Fortune, £19.
10 Great Wh. Bush, £4 6s. 3d.
50 Garreg (all calls paid), 5s.
5 Great Laxey, £25.
100 Gt. Nor. Copper, 1s. 3d.
50 Hindostan Singhbloom Copper, 19s.
20 Camborne Vein, £2 12s. 6d.
10 Hington Down, £5½.
10 Long Lake, £2½.
10 Calvadnack, £2 3s. 9d.
10 Central Grylls, £3½.
20 Cornubia, 24s. 9d.
5 Caradon Consols.
50 North Pool.
30 Caradon United, 37s. 6d.
150 Cuddra.
30 Grenver Abraham, £23½.
10 Crane.
20 Caradon Hill, 13s. 6d.
5 Chiverton.
1 Carn Brea, £69.
10 Cobre Copper, £36.
10 Chiverton Moor, £5 18s. 9d.
20 Drake Walls, 38s. 9d.
50 Don Pedro, 15s. 6d.
15 E. Carn Brea, £2 14s. 6d.
20 Russell, £4 18s. 9d.
10 East Chiverton, £2½.
5 East Lovell, £8 6s. 9d.
25 East Grenville, £2 10s.
10 East Providence, £4 3s. 9d.
1 East Basset, £7½.
5 East Grylls, £13 3s. 9d.
5 East Caradon, £29 18s. 9d.
20 East Rosewarne, £2 13s. 9d.
And is a BUYER of 1 East Pool, £500; 15 West Chiverton, £68½; 10 Chiverton, £18½; 5 Bryn Gwlog, £38; 5 Stray Park, £29; and 100 Vale of Towry, 5s.
3, Adam's-court, Old Broad-street, February 19, 1864.

MESSRS. VIVIAN AND REYNOLDS, 68, OLD BROAD STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS OF MINES, COMMISSION, AND GENERAL AGENTS FOR THE PURCHASE OF MINE SHARES, RAILWAY, AND EVERY OTHER DESCRIPTION OF STOCK.
Commission on share transactions 1¼ per cent. on £100 and above, and 2¼ per cent. on less sums.

MR. EDWARD COOKE, MINING SHAREBROKER,
75, OLD BROAD STREET, LONDON, E.C. Reliable information given on application, relative to the merits of mines, either for speculation or investment.
TO INVESTORS IN MINES.—Mr. EDW. COOKE begs to direct the attention of investors in mines to his weekly article in another page of the Journal, which contains some observations on the number of shares required.
Feb. 19, 1864. Bankers: Alliance Bank, Lothbury.

NORTH CHIVERTON.—EDWD. COOKE is instructed to SELL ONE THOUSAND SHARES in the above most promising mine, at £2 10s. per share net. An early application should be made, as the first applicants will secure the full number they apply for until the 1000 are distributed. Cheques payable to the North Chiverton Company, crossed to the Alliance Bank, Lothbury, to accompany an application for the number of shares required.
75, Old Broad-street, February 19, 1864.

MR. GEORGE BATTERS strongly recommends his friends to buy Tincroft, West Chiverton, Chiverton, Herodasoft, South Caradon, and Devon Great Consols for investment. These shares will pay good interest for money at present quotations.—76, Old Broad-street, E.C.

WILLIAM SEWARD, MINING BROKER, STOCK AND SHAREDEALER, 31, THORNTON STREET, LONDON, E.C.
Commission, 1¼ per cent. on all transactions.

THOMAS HAMILTON (late of Truro), STOCK AND SHAREBROKER,
4, AUSTINFRIARS, OLD BROAD STREET, LONDON, E.C.
Mine shares bought and sold on the usual commission.

MR. THOS. THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.

GEORGE RICE, SHAREBROKER, 5, COWPER'S COURT, BIRCHIN LANE, LONDON, (21 years' experience), has SPECIAL BUSINESS, as BUYER or SELLER, for cash or account, in the following mines:—

Closing quotations.	Closing quotations.
Chiverton	Proper United
Clifford Amalgamated	Nanglies
East Lovell	North Croft
East Caradon	St. Day United
East Russell	Tincroft
East Carn Brea	Wheel Crebor
East Grenville	West Chiverton
5 Clifford	Wheel Grenville
New Rosewarne	Wheel Seton
North Trekerby	Wheel Hope

For all shares bought by GEORGE RICE, he will give cash on receipt of transfer.
SPECIAL BUSINESS at close prices in East Caradon, East Lovell, Crebor, Chiverton, Chiverton Moor, and North Trekerby.
To SHAREHOLDERS AND SPECULATORS IN MINES.—After you have perused the various published reports and statements on the mines now brought before your notice, apply to GEORGE RICE, and take his advice as to which should be at once bought or sold.
Money advanced on mining shares.
Feb. 19, 1864. Bankers: Bank of London.

NORTH TREKERBY.—The accounts for the next meeting will show a far greater profit than the last, and a good dividend will be again declared. In the meantime there are several most important points to come off, either of which may send the price of shares to double their present value. The mine, selling at about £3 per share, with a large balance in hand, and a permanent dividend mine, is about half the price of other mines making regular calls, with no prospect of dividends. Orders executed, as buyer or seller, by G. RICE, 5, Cowper's-court, Birch-in-lane, London.

JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C.
J. HUME's "Circular" contains special notices and reports of the following mines, namely:—Great Fortune, East Lovell, Nanglies, Crebor, Charlotte United, Prosper United, South Condurow, &c. FOR SALE:—
100 South Condurow.
20 East Lovell, £28½.
10 Nanglies, £36½.
10 Great Fortune, £19.
50 Wheel Crebor, 47s. 6d.
10 East Carn Brea, £7½.
Mr. HUME has special business in South Condurow. Sellers or buyers will please state their limit. He will also advise on all the market mines.
CREBOR.—This mine is now one of the most investments on or off the market. The capital account is now closed, and in future the returns are expected to give good profits, and shortly to enter the Dividend List. The position attained by Crebor is only beginning to be appreciated. Shares are advancing, and will soon be £4.
In all commission transactions, Mr. HUME returns to clients the price dealt at.
Bankers: London Joint-Stock Bank.

MESSRS. WARD AND JACKMAN, STOCK AND SHAREBROKERS, 2, ADAM'S COURT, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C. (ESTABLISHED ELEVEN YEARS.)
TRANSACTIONS IN BRITISH AND FOREIGN MINING SHARES AND OTHER SECURITIES at closest prices, net or on commission, but not being DEALERS only execute orders confined to them.
Telegraphic messages to buy or sell shares of every description promptly executed for immediate cash, or the fortnightly settlements.
Messrs. WARD and JACKMAN beg to record their appreciation of the widely extended patronage they have received during the year 1863. This continued confidence of the policy of their system of business affords them much pleasure, and they now beg to hope that, by care and attention to every order (of whatever extent) that is entrusted to them, they may still continue to deserve the confidence of their clients.
Commission, 1¼ per cent. on all transactions.
Feb. 19, 1864. Bankers: London and Westminster, Lothbury.

MR. T. P. THOMAS has been favoured with instructions to SELL by PUBLIC AUCTION at Garraway's Coffee-house, Change-alley, Cornhill, London, on Thursday, the 25th day of February, 1864, at One o'clock, the following VALUABLE SHARES:—

50 West Par.	50 West Par.
1 West Frances.	1 West Frances.
25 St. Just Consols.	25 St. Just Consols.
3 Wheel Prosper (Brango)	3 Wheel Prosper (Brango)
150 Wheel Ida Lead.	150 Wheel Ida Lead.
180 Merilyn.	180 Merilyn.
70 Wheel Hartley.	70 Wheel Hartley.
10 West Condurow.	10 West Condurow.
335 Vale of Towry Lead.	335 Vale of Towry Lead.
50 Great Tregone.	50 Great Tregone.
60 Tamar Consols.	60 Tamar Consols.
10 North Buller.	10 North Buller.
25 Wh. Grenville Tin and Copper.	25 Wh. Grenville Tin and Copper.
10 East Seton.	10 East Seton.

Mr. T. P. THOMAS has also received instructions to SELL ONE THOUSAND AND FIVE (6400th) PARTS or SHARES in the NORTH POOL TIN AND COPPER MINE, ILLOGAN, CORNWALL, in lots suitable for purchasers.

For further particulars, and catalogues, apply to Mr. J. W. WATSON, 13, Cornhill; Garraway's Coffee-house, Change-alley; and the Auctioneer, 2, Crown-court, Threadneedle-street, London.

FOR SALE, BY AUCTION, EAST WHEEL MARTHA MINE, LAMERTON, IN THE COUNTY OF DEVON.

MR. T. P. THOMAS has received instructions from the Liquidators to SELL, BY PUBLIC AUCTION, at Garraway's Coffee House, Change-alley, Cornhill, London, on Thursday, the 25th day of February instant, at Two o'clock, in one lot, all that VALUABLE MINE. Together with the MATERIALS, &c., known as the EAST WHEEL MARTHA COPPER MINE, situate in the northern part of Lamerton, in the parish of Lamerton, in the county of Devon.
The seat is extensive, held on lease for 21 years, from 1st August, 1861, at £5 per annum, and 1-12th royalty, the present company have paid to the lord £1500, which is to be allowed out of the royalty.
For further particulars, and to view, application to be made to Mr. GEORGE SEARBY, or to the auctioneer, 2 Crown-court, Threadneedle-street, London.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER,
2, PINNERS COURT, OLD BROAD STREET, LONDON.
Mr. THOMAS has with great care, and with his best judgment, selected a few mines, the shares of which he recommends as the best purchases that can be made at the present time for an immediate rise and steady advance during the present year.
Mr. THOMAS invites special attention to this list, embracing as it does both dividend and progressive mines of rare prospects; the former now yielding a high rate of interest; the latter about commencing dividends.
Descriptive particulars of each mine are given, with rate of dividends, time of payment, latest market prices, &c. Free by post for six stamps.

MR. FRANCIS G. LANE, No. 2, ROYAL EXCHANGE, LONDON, E.C., has the following SHARES FOR SALE:—
20 Hington, £2½.
100 Trumpet United, 2s. 6d.
20 St. Just United, 60s.
50 N. Wh. Martha, 26s. 6d.
100 Hawkmoor, 3s.
50 St. Day United, 36s. 6d.
20 New Birch Tor, 56s. 3d.
50 Glasgow Caradon, £23½.
15 Chiverton, £18½.
5 West Chiverton, £67½.
BUYER of 100 Great Devon and Bedford (Colcharton), 30s. paid, 32s. 6d.
Bankers: London and County Bank.

JAMES B. BRENCHLEY, 78, OLD BROAD STREET, LONDON, E.C. PURCHASES AND SALES EFFECTED IN BRITISH MINES, in RAILWAY, BANK, and other SHARES, at close market prices. Cash on delivery of transfer.
FOR SPECIAL SALE:—25 East Providence, £4; 25 Rosewarne United, 26s.; 50 Wheel Ida, 6s. 3d., each net.
Bankers: London and Westminster.

SHARES WANTED.—State number and lowest price. At the same time they are strongly recommended for immediate investment and great advance.
West Caradon, £22½.
Camborne Vein, £27½.
Gonamena, £3½.
Bryntall, £2½.
Drake Walls, £1½.
South Frances.
Gribbler and St. Aubyn.
East Lovell, £8.
Copper Hill.
Rosewarne United.
South Basset.
Trencrom.
Clifford Amal., £38.
St. Day United, £13½.
H. H. RYE, Stock and Sharebroker.
Mining Offices, 77, Old Broad-street, London, February 19, 1864.

MR. WILLIAM WARD (late with Messrs. Dunsford and Ranken), SHAREBROKER, 29, THREADNEEDLE STREET, LONDON, E.C.

RICHARD CLIFT, MINE SHAREDEALER,
late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all letters are to be addressed.

MR. H. WADDINGTON, MINING AND SHAREBROKER,
26, THORNTON STREET, LONDON, E.C.
Shares in railways, mines, &c., bought and sold on the usual commission.

JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C., SHARES IN MINES BOUGHT and SOLD on commission, at 1¼ per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

JOSEPH GREGORY, STOCK AND SHAREBROKER,
2, HATTON COURT, THREADNEEDLE STREET, LONDON, E.C.
Commission on purchase and sale of mining shares, 1¼ per cent.
Bankers: City Bank.

MR. WALTER TREGELLAS, STOCK AND SHAREBROKER,
12, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.
Mr. TREGELLAS strongly recommends the purchase of Santa Barbara Gold, North Shepherds, and Chiverton Consols shares.

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., has FOR SALE:—
Bedford United.
Bronfloyd.
Chiverton.
Chiverton Moor.
Clifford Amalgamated.
Cook's Kitchen.
Drake Walls.
East Russell.
East Basset.
East Caradon.
East Lovell.
East Carn Brea.
East Chiverton.
East Gunia Lake.
East Fortune.
Great South Tolgus.
Gawton United.
Hington.
Kelly Bray.
Marke Valley.
North Trekerby.
North Croft.
Nanglies.
T. ROSEWARNE begs to inform his friends and clients that he is on a tour of inspection of the leading mines in Devon and Cornwall, and on his return will be happy to give that information his practical experience enables him to offer.
Feb. 19, 1864. Bankers: Bank of London.

GEORGE SEARBY, No. 2, CROWN COURT, THREADNEEDLE STREET, E.C.
RELIABLE INFORMATION respecting mining operations may be had by applying as above.

HENRY GULDSHARP,
ESTABLISHED ELEVEN YEARS.
STOCK AND SHAREDEALER.
No. 32, POULTRY, LONDON, E.C.
Recommends the immediate purchase of shares in the following mines:—
Chiverton, £18½.
East Caradon, £29½.
Wheel Treveltha, £23½.
East Providence, £4½.
Clifford Amal., £38½.
Chiverton Moor, £6.
Nanglies, £36½.
Lady Bertha, 16s.
Providence, £45½.
East Basset, £7½.
Wheel Grenville, £5½.
East Chiverton, £6½.
North Wh. Basset, £23½.
Wheel Basset, £25.
Great Fortune, £18½.
Bankers: London and Westminster, Lothbury, E.C.

MR. W. HANNAH, MINING, SLATE QUARRYING, INSURANCE, AND GENERAL SHAREBROKER,
ROYAL INSURANCE BUILDINGS, KING STREET, MANCHESTER.
A Monthly Investment Circular on application.

Original Correspondence.

APPLICATION OF MACHINERY TO MINING, &c.

I am glad to learn, from Captain Ennor's letter in the *Mining Journal* of last week, that he "has advocated for 20 years the use" of machines for boring rocks for blasting. Why, then, blame a member of the Cornwall and Devon Mining Association, for laying before it some details and drawings of the first that has been used in the world (continuously), and, let me add, with undisputed success, in the Mont Cenis Tunnel? Its arrangements and dimensions of parts can be modified for working in a mine level. The cylinder may be shortened and enlarged; and in lieu of the long racks on which the borer advances, and by which it is steadied, other appliances may be used, but with greater facilities, as in E. S. Crease's and G. Low's machines, for sinking a hole in the upper part of an end, at as great an angle with the horizon as can be done with the mallet. But its essentials—the motive-power, the rotation and rapid percussion of the chisel (not resembling the action of a gimlet, as erroneously stated in the "Westminster Review") can hardly be dispensed with. It may be long before Sommeiller's method admits of universal application, but it has already enabled him to advance at a giant's pace. Nearly 50 years ago I applied a screw (as a propeller) to the stern of a boat on Perran River, perhaps for the first time in Great Britain; not a long period elapsed before experiment had determined its best form for ocean voyages. In the Mont Cenis Tunnel more holes are required (nearly 60 in a shift) than if the framework of the machine did not cover nearly the whole face of the rock; there more time may be saved by rapidly boring many holes, than by giving different directions to several of the borers at the same time, although by the latter a greater barthen might be blasted. Captain Ennor is quite correct as to the charge of powder, the accidental error in my letter was publicly corrected by me, the quantity being 12 or 14 ozs.; the diameter of the holes was, I believe, named in my first communication. It is certainly not easy to watch (in the end of the tunnel) the progress of 8 or 10 borers, with as many jets of water, and 16 or 20 pistons, each moving 200 times in a minute. I have not carried a candle underground (occasionally) during nearly half a century now to hesitate, as Captain Ennor supposes, to walk to the end of the tunnel, and to pass by the side of the iron-worker, after purposely journeying 1000 miles to see it. To me the air in the end felt fresh and good; how could it be otherwise, when so large a quantity of it was discharged every minute? The men did not impress me unfavourably as to health, and the answers to my enquiries on this head were satisfactory. Where the miners are enlarging the drift made by the machine smoke accumulates in spite of the wooden pipe, through which water-power extracts it and bad air. The slope of the tunnel upwards from the mouth is an obstacle to any complete ventilation, otherwise a long air-pipe, carried up the mountain's side, as well suggested by Capt. Ennor, might aid greatly. I said nothing as to the "great depth being proof of the earth's interior fire," but merely what any stamper's boy might have suggested, and what the wisest man must admit, that when the tunnel reaches a depth of more than 5000 feet below the top of the mountain, it may be ascertained if the line of "equal temperature" rises upwards. We know that it does so in Mexico at a height of more than 7000 feet above the sea. I should, indeed, have had reason to land theory, if I could have anticipated by its means the observations of my brother on the increase of temperature in deep mines. He laboriously ascertained, and then published, the indisputable fact that, *ceteris paribus*, there was an average ratio of increase, and that it was independent of men, candles, blasting, and even of any chemical changes in the adjoining portions of rock or of veins. But he did not speculate either as to the limits or rate of this increase at greater depths, whilst he drew this amongst other important practical conclusions—that where volumes of hot water rise in the bottom of a mine, the lode continues to a greater depth, and not in a squeezed up, unproductive state. Captain Ennor may see in this neighbourhood, that where vast dykes of molten trap have intersected the coal seams, these have been charred by the heat.

One object of the Miners' Association of Cornwall and Devon is to promote the discussion of mining topics. I regret that it had not the benefit of Captain Ennor's "severe criticism" on some remarks of mine at one of its meetings. If experienced men will not instruct us, they must not complain if others open their lips. Captain Ennor is thankful that mining was so slightly touched on, as so little was said to the purpose. In answer to his enquiry, the electro-magnetic battery (as employed with advantage at Woolwich), is portable, very simple, and not likely to get out of order; its use has greatly expedited the sinking of some colliery engine-shafts: it is carried as easily as a borer from one part of a mine to another, or by wires can command several distinct "bargains." Many miners have witnessed its effects in blasting at the Falmouth Docks. As to the cleft, short, wooden rod, resting on a wedge above the powder, its use lessens the danger of accidents to the men; and the tamping is rendered both easier and more perfect. This is not a question of theory, but of successful practice. I do not understand Captain Ennor's allusion to "Blanding or even Brigham Cave." Possibly his words are misprinted; but I am much mistaken if miners, at "account dinners," do not often discuss the phenomena of rocks and lodes remoter from Cornwall than any to which I may have wandered. I am sure that Captain Ennor will be welcome at any of these with his full budget of observations on the Continent. C. Fox.

Middleton Lodge, near Richmond, Yorkshire, Feb. 13.

ON THE ADVANCE OF SCIENCE IN CORNISH MINING.

SIR,—The Cornish motto is "One and All," but the Cornishmen of the present day do not seem to display that unanimity of action in public enterprise which was so peculiarly the characteristic of their ancestors, and which won for them the above noble motto. This impression is now forced upon us especially, when Cornwall lags so far behind other parts of England in the encouragement of scientific mining. In stating this, it must not for a moment be thought that we wish to ignore the just claims of practical knowledge, or in any way to diminish aught from the position Cornishmen occupy in the mining world, for we too well know that wherever mining undertakings are entered upon there Cornish miners are in demand. But because we, as Cornishmen, may safely boast that we are the most efficient practical miners in the world, ought we therefore to be unwilling to acquire knowledge of Nature and her laws, or rather wish to continue in the prejudiced grooves of ignorance trodden by our forefathers? This is an age of progress; but we begin to doubt whether the time has yet come for the advancement of the West, when we read the account given in last week's *Mining Journal* of the meeting of the Miners' Association of Cornwall and Devon, held at Redruth. This association has now been in existence nearly four years, and has been hitherto unable to pay its way for want of support from the mining community of the West. Many ask—What good can such an institution do to the practical miner? a question which we can only answer by asking another—What constitutes a thorough miner? Is it not a practical acquaintance with mining operations at surface and underground, practically obtained, combined with some experience of mineralogy and metallurgy? Now, in Cornwall there are many men who can efficiently lay out a mine and work it, and men who would never fail to detect the presence of copper or tin, as they are accustomed to see them in the Cornish ores, but ask such men to tell you the percentage or exact value of their ores, and they cannot; or show them tin ores, such as we have seen from China and North and South America, some of which exactly resemble a micaceous schist rock, and others nearly as white as marble, and they would fail to detect the presence of a particle of tin. But arm such men with a blow-pipe, and give them some laboratory experience, with a smattering of mineralogy, and they will with ease detect the smallest quantity of metal. This case of the tin ores is not a supposititious one, but one that has come under our own personal knowledge, and will serve to show how incalculable wealth may be passed over by the ignorant. The day, however, has passed by when scientific research was deemed useless, and now every day civilised man has to acknowledge the debt he owes to the students of science. Taking it, then, for granted that the miner ought to be versed in the elements, and we will not say more, of mineralogy and metallurgy, how is it that the Miners' Association of Cornwall and Devon has not been more ably supported by that class which it was created to benefit?

This is the third attempt made to establish a Mining School in Cornwall during the last few years, and this seems, like its two predecessors, to be unpopular, although countenanced at its commencement by the leading miners of the West of England; and it can only be a matter of wonder that men like Mr. Charles Fox are to be found, who continue to persevere in their thankless attempts to impart instruction to their fellow-countrymen, and to lighten their labour by the introduction of mechanical appliances in mining operations. Some would have us forget that to Mr. Fox we owe in a great measure the introduction of the man-engine into Cornwall, and

that he has devoted much time, labour, and money to the general welfare of the Cornish miners. Allowing that he is somewhat premature in asking us to adopt the complicated machine used in the tunnel of Mont Cenis for boring, yet no one can doubt but that eventually some modification of that machine will be brought into use in Cornwall. Mr. Fox has shown us that the rock bored through in Mont Cenis is not pie-crust, and the engineer's reports prove to us that the pace is not slow, as Mr. N. Ennor would have us believe. Most of our best mining engineers of the West have long contemplated a boring-machine, to supersede the usual hand boring, but the intricacy and diminutiveness of our levels in the Cornish mines has hitherto been the great barrier to its introduction. It is, however, only by a complete sifting of the difficulties to be overcome, and by the encouragement of such men as Mr. Fox, that we are likely to get boring-machines in Cornish mines.

Philanthropy is not a common attribute of man in this striving, struggling age of competition, and we ought, therefore, to be the more willing to give those who display it credit for the desire they manifest to benefit their fellow-creatures. Little notice has been taken of the noble building lately erected by Mr. Robartes, of Redruth, for the relief of, and to give medical assistance to, the sick and needy miners of that neighbourhood. Such institutions are, indeed, sorely wanted in our large mining populations, and we would that the wealthy landowners of the West, who receive large incomes from mineral property, felt more accurately the responsibility of their position, and devoted their charity to the foundation of such hospitals rather than to the memorialising men of their own class, who know not the stern realities of a life of poverty, or the sufferings of their fellow-men. Mr. Robartes has also, during the last few months, renewed a lease of a valuable dividend mine in the Camborne district, with almost nominal dues, and, moreover, promised a sum of money if the adventurers will erect a man-engine on the mine. This is a noble example for the other rich landowners of that district to follow. At present there are only eight man-engines in all the mines of Cornwall. The names of these fortunate mines are—Levant, Wheal Reeth, Dolcoath, Carn Brea, Cook's Kitchen, United Mines, Par Consols, and Fowey Consols. When we consider the labour and time lost in climbing ladders, we wonder that mechanical contrivances are not more commonly employed for lifting the men. Looking, for a moment, at the saving of time, we find that to descend to the depth of 250 fathoms by ladders a man will occupy about 40 minutes, and that to ascend for the same distance he will take one hour. Now, in the single rod man-engine he can go up and down this distance in 50 minutes, thereby saving one-tenth in time of the miners' working day. The saving in fatigue is probably more, and the advantage to the health of the miner incalculable. Whoever has watched men arrive at grass from the bottom of our deep mines, and has seen the panting, heaving chest, with the hollow cheek and sunken eye, will allow that the climbing up ladders after a hard day's work, in a close end it may be, is a truly barbarous custom. There are difficulties we know in placing man-engines in many of our Cornish mines; but where the depth of the mine is great, the number of men employed large, and the general prospects of the mine good, we can but think it is incumbent on the shareholders to apply mechanical means for lifting the miners. We believe it is universally admitted that the man-engine is superior, as compared with the skip for this purpose, firstly, because it is more economical; and, secondly, because it is more safe. Continual accidents are happening in the Cornish skips, and the fearful accident in the "gig" at Botallack must still be fresh in the memories of many, but we are not aware that a single catastrophe has occurred in any of the eight mines we have mentioned, condemnatory of the invention, or rather of the adaptation of the German Fahrkunst to our Cornish shafts. If we lived in a sleepy, slow-moving age, we should have no need to trouble ourselves about the important question of the permanent value of our labour; but since it happens that we live in a progressive and competitive age, it behooves us to consider whether we are advancing with the progress of events. Are, then, we would ask, Cornishmen wise in nursing themselves in vanity, and in their pride refusing to look at the causes which produce the rapid strides of industrial advance in other parts of the world? Cornishmen, as a rule, cling pertinaciously to old processes and modes of working, and are jealous of every change, questioning the utility of science and modern discovery, and hugging the notion that science and practice are diametrically opposed to one another. There is no greater fallacy than this, and we may rather say that science and practice are co-ordinate, both combining, when rightly directed, "to enlarge the boundary of human empire to the effecting of all things possible."—Feb. 15.

THE NEW GEOLOGICAL SPECULATIONS.

SIR,—I shall be happy to see in your columns a discussion upon Mr. Dickinson's paper, as has been proposed; but to produce any useful result it will require to be conducted in different temper to that which "Carbonaceous" has inaugurated. In his onslaught he has prejudged the case before hearing it; and in his zeal for upholding his own geological views, he has introduced insinuations, based solely upon his own unrighteous decision in this case, bearing upon the practical duties which, from the long test to which they have been satisfactorily subjected, might well have been left out. Seriously speaking, if "Carbonaceous" has any claim to the supercilious position which he has assumed, he will, upon reflection, recoil from the expression of groundless fears which may injure anyone, especially from venting them under the cover of an anonymous signature; and it will become unnecessary in future to be reminded of what is due between man and man by me.—Feb. 17.

FAIR PLAY.

VENTILATION OF COAL MINES.

SIR,—I have already described the principal features of ventilation as generally practised in this district; I propose now to give illustrations of two distinct systems of ventilation—one by machinery, and the other by furnaces, in order to show the capabilities of each system. So much has of late years been written on the ventilation of mines, that the subject may be said to be almost exhausted, but I hope we shall continue to make further improvements, and be willing to adopt any suggestion, with the view of testing its practical utility. On the occurrence of an accident in coal mines, accompanied with great loss of life, suggestions flow from all parts with the object of preventing these calamities. Perhaps in no department of industrial pursuits has advice been so freely given, there being a conviction in men's minds that something was wrong in the principle of conducting them. I am not aware that these suggestions have resulted in any plan of practical usefulness, or having any claim to utility, if we except the steam-jet system of ventilation; but this pressure from without has operated in causing a larger circulation of air in collieries, and much greater carefulness, in most cases, in their underground management. The subject being one of paramount importance, any plan tending to alleviate the risks in connection with working coal, will, I hope, be accepted in a proper spirit. In adopting an air-machine, a pit is required to be appropriated to and in connection with the air-pumps; the machines most in use are those patented by Mr. Struvé, one of which was at work at the time of the explosion at Risca, in Dec., 1860. This machine had two double-acting air-cylinders, 18 feet diameter, 6 feet stroke, performing at the rate of eight strokes per minute, this gives 48,858 cubic feet of air per minute, as drawn from the mine: the machinery being of a complex character, it was stated, this was about the limit to its regular performance; but with a machine less complex, similar to that described in the *Mining Journal* of Jan. 19, 1861, where the piston works in the cylinder without touching the sides, non-connection between the top and bottom of piston being preserved by thin flexible diaphragms, this machine may go ordinarily fifteen strokes per minute, drawing 91,608 cubic feet of air. The large air-machine at Mountain Ash Colliery, in South Wales, has, as I understand, a piston not touching the sides of the cylinder, the space being so small that air is not lost from one side to the other to a great extent. Referring again to the Risca machine, it was stated that the pressure was 4 inches of water column at or near the air-cylinders; from the quantity given, 48,858 cubic feet, 1-99th must be deducted for the air being in a state of tension, leaving 48,365 cubic feet, the quantity obtained per minute of the ordinary density. This serves to illustrate an important principle of ventilation; the great pressure, 4 inches, being caused by resistances in the mine, which should be avoided by enlargement of the intake and return air-ways; or by splitting the air the same result may be obtained. The intake being required largest from the downcast shaft, where the whole current is going, and decreasing from where the different currents branch off, velocity should not exceed 8 feet per second. In returning, the air-ways are required of larger size from where the currents join together, on their way to the upcast pit. When we consider that the force required increases as the square of the velocity, the importance of a low rate of velocity and large air-ways is evident; for as the resistances are lessened, will the flow of air be more easy into the vacuum of the air-cylinders, and the drag in the mine diminished. Ventilation caused by furnace and heated upcast being the rule in the

counties of Northumberland and Durham, I hope to see the machine system tried in competition with it. The furnace should be supplied with fresh air. A colliery in Lancashire is stated to have 130,000 cubic feet of air per minute passing in the workings, and has a furnace 40 yards from the upcast, supplied with 18,000 cubic feet of fresh air per minute, passed through the fire. The air from the mine unites with that from the furnace at the end of the furnace-drift; the ventilation is thus placed on a much safer basis than in the ordinary method, where the air from the workings may or may not be intermixed with inflammable matter on passing over the furnace. The power of this kind of ventilation may be reckoned thus:—With two shafts, of 10 feet diameter each—78½ feet area, and 10 feet velocity in downcast per second; depth, 300 yards; downcast temperature, 60°; upcast temperature, 120°.

Volume of air at 60° = 480
Weight of air at 60° = 1.224 ounces.
1.224 x 900 feet = 1101.6 ozs. per foot area.
1101.6 x 480 feet = 979.2 ozs. per foot area.
540
Difference in weight of columns, 122.4 per foot area.
122.4 = 7.65 lbs. pressure per square foot.
16
78½ square feet x 7.65 = 600½ lbs. total pressure.
600½ x 60 velocity = 10.9-10ths horse power.
Then, 33,000
This is equal to a circulation of 47,100 cubic feet per minute.

It will be seen from these calculations that the power may be doubled in pits of the same area, by lengthening the heated column to 600 yards, with the same temperature; or by heating the upcast to 180°, the other conditions being preserved, the power may be increased four-fifths more.

I have now noticed the prominent advantages of machine ventilation, provided with spare engine-power in contrast to furnace-power: economy of fuel will, probably, be in favour of furnaces in very deep shafts, but in favour of machinery in shallower ones.

The loss of life from accidents in coal mines in Great Britain in the year 1862 is reported to be 1135, the loss of life in 1861 being 943. The average loss of life for the six previous years is shown as follows:—

From explosions	239 per year	Shaft accidents	192 per year
Falls of coal and stone 387		Miscellaneous	191
Total	1009 per year		

The loss from explosions thus amounts to nearly one-fourth of the whole: I gave one-sixth in a former letter, but the statement was made for a period of two years only. The accidents from falls can only be counteracted by increased carefulness and sufficient timbering. I shall be glad if the suggestions for the use of guards at working shafts, and efficient brakes to the engines, should contribute to lessen the number of shaft accidents.

A system of pipes for ventilating a large colliery, such as that alluded to by your correspondent, "M. E.," in the *Journal* of Jan. 16, I consider would be quite inefficient, unless the pipes were made of a size approaching to that of the air-ways of a mine; and it may be supposed the expense of such pipes would deter anyone from adopting them. But small pipes may be used with advantage in clearing goaves of gas, as before observed, opening into rarified air at the outer end, which would cause a continued draught through them.—Durham, February 15.

B. M.

PUDDLED STEEL—MANGANESE PIG-IRON.

SIR,—The following translation of a letter received from a correspondent, on the subject of Manganese Pig-Iron (Spiegeleisen) for the Bessemer process for Puddled Steel, will be of interest to many of your readers. We know, at least, that several of our friends are at this moment puzzling themselves over experiments having for their object the improvement of their make by the admixture of spiegel or spathose pig-iron. The terms A and B refer to qualities we are importing into this country.

Laurence Pountney-hill, Feb. 17. WM. BIRD AND CO.

"Our best puddled steel is the product of Sieger steel pigs made from pure spathose ore. These pigs exhibit great affinity between carbon and iron, so that in the puddling process a portion of carbon is retained in the iron, to which it firmly adheres, and produces a puddled steel of remarkably strong and tough quality; we may, therefore, classify our puddled-steel as a tough welding steel, which increases in hardness in proportion to the presence of carbon. The quality of these steels is much influenced by the presence of manganese; for, although pigs which do not contain it may be puddled into a metal having a percentage of carbon, yet the steel produced by the use of such pigs does not contain the carbon in the further processes. Amongst all steels iron spiegeleisen, is that containing the largest percentage of carbon and manganese, and it cannot, for this reason, be puddled *per se*. It retains the carbon with such tenacity, that the puddling process takes up too much time, and, therefore, is too costly; whilst the manganese, by destroying the slag with which the walls and hearth of the furnace are fettered, allows the puddled metal to run through the lining of the wall and hearth like water. To obviate this, pigs produced from good spathose white carbonate ore, and that differ only from the spiegel in containing a lesser percentage of carbon and manganese, are used as an admixture; but even then the linings of the furnace are so much acted upon, that it is found necessary to cool them down with water instead of air, and a continuous flow of cold water is, therefore, directed through the hollow iron tubes which surround the lining and hearth of the furnace. The furnace is worked in the same manner as for making iron, only that a higher degree of heat has to be kept up; and on making the steel blooms, the register is closed, and a dark flame introduced into the furnace, in order to prevent the edges being burnt. The furnace may be charged by this process five or six times within the twelve hours, each charge being about 4 cwts., on which the loss will be about 12 per cent; add 20 to 30 lbs. of the genuine spiegel, according as the puddling process is too fast, or the contrary. If hard puddled steel is required, more spiegel is thrown in; but for mild puddled steel, add good soft English pig-iron, which should be of so good a make and quality that it will readily and thoroughly combine with the steel pigs. You will find that about 50 per cent. of this secondary spiegel—your B pig—used with good English pigs, and the little dose of spiegel, will produce a good strong quality puddled steel, suitable for steel rails, tyres, plates, angles, &c., and the cost of production will not stand higher than for best descriptions of Staffordshire make. The superiority of German steel-iron products results from the use of this primary and secondary spiegel (if I may so term it); and as soon as the peculiar process in working and adapting them to the admixtures of English pig is fairly understood by both masters and men, you will find the demand for England greatly increased, and the B quality become as necessary to your ironmasters as the A quality is acknowledged to be indispensable to our Bessemer process."

GOVERNMENT INSPECTION OF METALLIFEROUS MINES.

SIR,—The attention of the public has been again directed to the danger of unfenced abandoned shafts through the accident at old Wheal Unity Wood. It has been stated that there are scores of open unused shafts in Redruth and the adjoining parishes, many of them close to roads and dwelling-houses, the neglect to fence which has caused many deaths, whilst in Gwennap parish there is a shaft where several have lost their lives. The shaft at old Wheal Unity Wood is 360 feet deep, and, according to the *West Briton*, not 3 feet from a public road, 10 or 12 feet wide, over which scores of persons pass daily, and many horses and carts. It seems extraordinary that some fearful accident had not occurred at this dangerous shaft before the unfortunate woman fell into it. This, however, is only one of many instances of a similar kind, and the question occurs how is it that the waywardens have so long neglected their duty as not to have given notice from time to time to the responsible parties of the existence of these frightful shafts in their respective parishes, with a demand for their protection? It is further very truly stated that legislative action, and the visitations of Government Inspectors, are undesirable, if the object can be accomplished without them; and there are practical men connected with the mines of Cornwall and Devon who conceive that the application of some of the provisions of the above-named Act to metalliferous mining would be very discouraging and damaging to a pursuit which is so very fluctuating and uncertain in its results. If the lords of mine sets will see that stringent covenants for the fencing of unused and dangerous shafts are inserted in their leases, and will insist that they are carried out; and if the new highway boards will also look after all unprotected shafts that come within their jurisdiction; then further legislative action may, perhaps, be deemed unnecessary, and Cornish mining continue to be prosecuted without the overbearing and interference of Government Inspectors. I could readily understand this line of argument if unfenced shafts were a new evil; but the truth is that all ordinary means to induce mine lords to attend to the abandoned shafts on their estates have proved fruitless,

and that nothing short of stringent legislative measures is like to have any beneficial effect. It has been remarked in the Journal that there is quite as much necessity for Government inspection in metalliferous as in coal mines, and this seems daily to become more apparent. Not only are many valuable lives needlessly sacrificed in the metalliferous mines of the country, but the general working arrangements are acknowledged to be capable of great improvement, and there is little doubt that if something like the German system, of requiring all men to pass an examination before entrusting them with the management of a mine, were introduced, the profits of mining would be considerably increased. J. F.

BRITISH AND FOREIGN MINE ADVENTURES.

SIR.—The *Mining Journal* of January 16, containing a letter from Mr. Trevethick, in reply to mine of Dec. 31, was duly received by me in Germany, but I could not answer it sooner, as I only returned the other day to London, and my time on the Continent was taken up by other business. Mr. Trevethick is again guilty of exaggeration, in stating that only one out of 101 English companies in Germany has returned a profit, for after much trouble he has only succeeded in enumerating altogether 17 English companies in Germany, eight of which are still progressive mines, and may yet prove successful, while the Ruhrort Coal Company, situated in the neighbourhood of the valuable Concordia Colliery, has only suspended operations temporarily, on account of insufficient capital. Several others, as the Wildberg, Rhenish Consols, and Great Central Slate and Slab Company of Germany, are now worked again, and the director of another has absconded with a large portion of the money contributed by the shareholders, circumstances which must not be ascribed to the poverty of the mines, but to bad management and other causes. The Hibernia Colliery, mentioned by me, is, perhaps, as Mr. Trevethick remarks, not exactly a joint-stock company; but it surely makes no difference if there are 10, 15, or even 100 and more shareholders, as the success of a mine does not depend upon the number of the shareholders, but the riches of the mine, sufficient working capital, and judicious management. The Hibernia coals, as well as those of the Ruhrort collieries (they are never called Dusseldorfer coals), are not losing but, on the contrary, gaining more ground every day, as also noticed in your Journal of Feb. 6, under the head of "Foreign Mining and Metallurgy;" nor am I aware that the profits of Hibernia are materially decreasing, although Mr. Trevethick may be better informed on the subject, in which case I should like him to prove his statement. He furthermore appears to think that the success obtained by Hibernia is owing entirely to the flatness of the seams; but wrong again, for Shamrock, worked by the same company, dips considerably, as well as most of the other successful collieries in the neighbourhood—viz., Königin Elisabeth, Victoria Mathias, Selzer Neuck, Helene and Amalia, Concordia, Graf Beust, Carolus Magnus, Gustav, Hagenbeck, Friedrich Wilhelm, Friederica, Steingatt, Zollverein, &c. The seams of the first-named company, for instance, dip 57 to 63 degrees on the average, and, notwithstanding, the mine has paid in one year as much as 34,560, upon a paid-up capital of 45,000, which every rational capitalist must consider a highly satisfactory result. Mr. Trevethick also says that most of the German coal seams are fearfully tilted, and, on a map, would look like three or four closely packed V's. But I am afraid he never has seen the true map of the Westphalia seams, as they appear very regularly there, although dislocations must take place occasionally there, as well as in England and elsewhere. The map referred to is in my possession, and open to everybody's inspection. I should like to have a copy engraved in the Journal, to show the English capitalists how unfounded most of Mr. Trevethick's assertions are, but it would take up too much space in your valuable Journal. Mr. Trevethick is apparently bent upon running down German mine adventures, but, unfortunately, most of his statements are exaggerated; and this also applies to his assertion that one seam or lode often belongs to one company, the next to a second, and the following to a third, for this inconvenience has been done away with about 10 years ago, and now only takes place in exceptional cases, in old concessions. Nothing, however, is easier for a company than to ascertain if there are any other mining operations carried on below their property.

Turning to Zollern, Grosse Hoffnung, and Neugeboren Kindeln, Mr. Trevethick's statements and calculations are equally careless as in his letter of Oct. 27, and I should not take the trouble of contradicting them, as he appears to delight in depreciating the value of these undertakings especially, unless I felt it to be my duty to prove to the capitalists that I only bring carefully selected mines before them. Mr. Trevethick, if he really has the interest of the English capitalists so much at heart, and does not think it advantageous for them to embark in any foreign mine undertakings, could have attacked other undertakings brought into the market since Sept. 12, 1863, with more prospect of success; nor should he be satisfied with having a few questions answered, which nobody having read the prospectus ever would have asked; but as he wants the information I shall not withhold it, and plainly answer them. The Zollern Colliery Company, containing 18 adjoining coal concessions, covers about 3250 English acres, and the right to mine extends to all coal seams vertically beneath the surface thereof. The Grosse Hoffnung and Neugeboren Kindeln, which form one set, are not yet offered to the general public, and the particulars have, therefore, little interest; but I may as well state here that the concession now called Grosse Hoffnung includes the old Grosse Hoffnung, Neugeboren Kindeln, and at least eight other mines, covers 1751 English acres, and the right to mine extends to all mines and minerals which exist vertically beneath the surface thereof.

Mr. Trevethick has asked no other questions, but continues to make assertions with regard to Zollern, Grosse Hoffnung, and Neugeboren Kindeln which I cannot pass in silence; and, for the sake of clearness, I shall begin with Zollern. In his letter of Oct. 27 Mr. Trevethick mentions that the whole 75,000, resolved to be raised by the loan was required for one additional powerful pumping-machine; and, although I proved to him that such was not the case, he still persists in the statement, to which I can only give the same reply as before, as space does not allow me to copy the whole prospectus. This next statement, that it is necessary to raise the 75,000, to open what is, in fact, a neighbouring colliery, and that it is proposed to form a company with 285,000, and to give the old shareholders 210,000, for their property, and the new ones a discount of 11,250, necessary to work it, is a misunderstanding. The plain facts are as follows:—It is proposed to raise a permanent loan of 75,000, required to complete the workings of the Zollern Colliery Company, and to allow the preference shareholders not only 11,250 discount, but to pay them also after the completion of the work, till which time they receive 5 per cent. interest for their money, a preference dividend of 10 per cent. out of the net profits of each year upon the nominal value of their shares, before the original stockholders are entitled to any dividend whatever.

According to the opinion of three eminent mining authorities, Messrs. Searle, Royal Mining Councillor; W. Mulvaney, principal shareholder and manager of the Hibernia and Shamrock; and Dämmler, Assessor to the Court of Mines, only 35,000, to 36,000, are required for the purpose; but to prevent every possibility of falling into the same dilemma again, the board of directors has resolved to raise a loan of 75,000. This undertaking has the great advantage over others of a similar description, that the money is to be spent upon a work already begun, and that will pay at least 10 per cent. upon the nominal, or 11 13-17ths per cent. upon the paid-up capital every year, it being calculated that the colliery, when completed, will pay fully 10 per cent. for the whole capital of 285,000, equal to 37 1-3d per cent. upon the 75,000. These calculations, of course, can never be made with any degree of certainty, but will, notwithstanding, prove that there is hardly any chance of the preference shareholders ever receiving less than 11 13-17ths per cent. for their money. I may add here that the seams, which are all profitably worked by the surrounding collieries, contain such an enormous quantity of coal, that they cannot be exhausted for several centuries to come; the coal is of the best quality, and proved to be well adapted for coking and other purposes. Boring experiments have been made in all the concessions to prove the existence of coals, and the seams which were met with had a respective thickness of:—

Concession, No. 1	59 inches	Concession, No. 8	15 inches
" 2	49 "	" 9	10 "
" 3	22 "	" 10	10 "
" 4	91 "	" 11	85 "
" 5	49 "	" 12	58 "
" 6	70 "	" 13	140 "
" 7	20 "		

The machinery and buildings are all in excellent condition, and the works can be taken up again as soon as the necessary money has been subscribed. With regard to Grosse Hoffnung and Neugeboren Kindeln, Mr. Trevethick is correct in calling them abandoned mines, as they, as well as the other small mines now forming the Grosse Hoffnung Fundgrube, have been worked on several lodes during the last century in the shallow levels,

but the exceptional case of Great Wheal Vor cannot be applied to them, as they all of them have shown an abundance of rich silver ore, and only been abandoned as there was not sufficient water to use for motive power, and steam power could not be employed on account of the scarcity of coal; now, however, things have changed, and Freiberg being connected since 1862 by rail with all the coal basins in the neighbourhood, any quantity can be secured at a very low price.

Finally, Mr. Trevethick advocates a theory, about which I shall say nothing, as I am sure that the judgment of all parties versed in mining affairs will be on my side when I condemn it as a quite erroneous one; for I never heard that it is an advantage for a mine to be situated in a district in which there are no good mines in the neighbourhood. It must also be taken into consideration that in former times the Saxon Government only granted very small concessions, and that, therefore, no operations of any magnitude could be carried on. In Saxony, the Government only granted mining concessions in former times 7 fathoms long (see Agricola, lib. iv., p. 9), and insisted upon every sett being worked by a separate shaft. I believe I have herewith given a sufficient answer to Mr. Trevethick's letter, and do not see why English capitalists should not embark their capital in Germany as well as in more distant countries, which cannot hold out such inducements as Germany, where mining companies can obtain a lease in perpetuity, and not only for a short fixed period, as in England.—Feb. 15.

J. A. D. HEIDTMANN.

P.S.—I have read just now the *Mining Journal* of the 13th inst., containing a very interesting article, entitled "A German Mine," which corroborates more or less everything I have said of mining in the Freiberg district. I fully agree with the article in question, and take the liberty of adding a few words about the tunnel mentioned therein, which, unfortunately, contrary to the wish of his late Excellency August Wolfgang von Herder, is not to be continued to Meissen, but only to Rottschonberg, a distance of about 6426 fathoms, or 4934 fathoms less than originally intended, the cost being thereby reduced by 2,100,000 thalers (315,000,000); but, notwithstanding, it remains a tremendous work, which will drain off the water 53 fathoms under the Anner Stollen, one of the deepest in the district (it would have been 96 fathoms if continued to Meissen), and when completed will cost rather more than 225,000. Having mentioned the name of his Excellency August Wolfgang von Herder, it may not be uninteresting to some of your readers to learn that he has made careful calculations regarding the value of the mineral wealth hidden in that district, and estimates it to be over 400,000,000 thalers, or 60,000,000,000, so that capitalists have still a wide field in that part of Germany. To prove the riches acquired by mining operations in former times in Saxony, the author has mentioned a feast given 800 years ago, where tables and chairs were of solid silver; and this is not a single instance, as similar things have occurred repeatedly there. Ritter Theler gave, A.D. 1557, a grand banquet in the Hockendorff Mine, where the tables and seats, cut out of solid silver, weighed 20 tons, and contained silver to the value of 1,000,000 thalers, or 150,000,000 sterling. This same gentleman had all his horses' shoes made of solid silver, and as they were only fastened with a few nails, the horses constantly lost them; but so proud was Ritter Theler, that he did not allow his servants to pick them up, but gloried in having it said by the people who found them—"Ritter Theler's horses have been here." The mine of Hockendorff, on the day of the banquet, during a heavy thunderstorm, was completely drowned, and has never been worked energetically since.—London, Feb. 17.

J. A. D. HEIDTMANN.

SALES OF METALLIFEROUS ORES BY TICKET—A PUBLIC AUCTION.

SIR.—In last week's Journal I was not a little startled by the announcement that the question had been raised by the Inland Revenue Commissioners, and that they considered, and were advised, that sales of metalliferous ores by ticketing should be conducted by a "licensed auctioneer." I cannot believe that such can be the serious views of the Commissioners. I fully agree with the whole of your remarks, and that such sales cannot in any way be considered as sales by auction. If such were considered the law, and enforced, the whole of our commercial usages would be entirely changed; and, as far as my views go, every transaction now submitted for tender would have to be brought under the influence of the "licensed auctioneer." Farms and all contracts, Government and otherwise, army clothing, victualling, &c., which are now let by tender, to the highest bidder, or tenderer, are, in my opinion, under the same principle as sales of ores by ticketing, which ticketings are neither more nor less than tenders, without the power of advancing on the price offered in the same.

Feb. 18.

SALOP.

LONG LEASES FOR MINES.

SIR.—In last week's Journal Mr. T. M. Pascoe, in a letter on this subject, suggests that "if a lease for a mine is only granted for 21 years, the lessees should have the privilege of holding it at least 10 years more by giving 12 months' notice before the expiration of the term." Now, my information has been that a mine or quarry lease for 21 years was renewable as many times as the lessee thought fit to require it, on the same terms as previously; and so long as the conditions therein were complied with, the lessor could not dictate new terms, or refuse the renewal. I should feel much obliged by any well-informed correspondent saying whether my information on this subject is correct.

Chester, Feb. 17.

A. B.

THE "SCIENCE OF MINING"—MODEL REPORTS.

SIR.—The men whose lamentable ignorance Mr. John Smart so instructively pictured in the Journal of Jan. 23 have, apparently, treated that gentleman with contempt. Now, considering that Mr. Smart's charges were put forth for the purpose of discussion, and, inasmuch as the subject involved is one of such general importance to the community, I do think his overtures should have been courteously noticed. Mr. Smart has done much to enlighten the public on the phenomena of mineral deposits, and it would be for the public good not to permit him with epigram and abuse, but to appoint him chief manager of all the mines in the kingdom. Mining would then become a certainty, Mr. Smart's nod being sufficient to direct every speculation to abundant success. Mr. Smart has shown that he is a perfect specimen of what a scientific miner ought to be. His knowledge of the collateral sciences of physics, chemistry, mineralogy, zoology, and botany is all but infinite, and, once installed in the chair of wisdom, he would soon turn the world upside down. A great philosopher once said—"If I had a fulcrum to place a lever on, I would lift the world." Smart man he was, but a vain boaster compared to the king of philosophers, whose great merit it is now my pleasure modestly to mention. The South Wales Institute, you see, had the good sense immediately to notice Mr. Smart's offer to read papers on the "Condition and Nature of Mineral Lodes in the Silurian Rocks of their Country," and are now probably making arrangements to secure so desirable an object. Had we treated the gentleman with due respect, the metal mines of Cornwall would, no doubt, have come in for a share of his distinguished notice. If we were to have a Minister of Mines, I have no doubt his eminence would be unanimously chosen to all that high office. The duties of minister and those of supreme working commander must be blended to advantage, and as one master-mind can move the whole machine, why let him do it. The minister would soon rid us of pretentious mine agents—the conceited fellows—who, when they go beyond their tether, write the veriest nonsense that ever sullied paper. The doct who should assert that chalk is not cheese, tin is not sawdust, or granite blue lies, without also giving the why and wherefore in exact scientific phraseology, would be looked upon with suspicion, and would soon come to grief.

The great impediment to successful mining being the scientific short-comings of the men really at the head of our lead and copper mines, the minister and supreme commander would, in his wisdom, direct that such men be discharged forthwith. Taking for granted that men who write badly cannot be judges of the merits of mineral lodes, the minister would insist that all candidates for the vacant situations must be able to deduce for themselves the fundamental facts and principles of the English tongue; first, in regard to the forms of the language, or its grammar; secondly, in regard to the productions of the language, or its literature; and, thirdly, as an appendix to the last, in regard to the origin and progress of the language, or its history. Having this qualification, they would find no difficulty in acquiring a profound knowledge of the language of rocks and mineral lodes.

Every candidate will be expected to be well up in chemical nomenclature, chemical notation, the laws of gaseous volumes, heat and its chemical relations, crystallisation and crystallography, an adept at inorganic chemistry, and master of the blow-pipe. He must be able to exhibit, on a kind of geological table, the classification adopted by modern geologists in describing the various rock formations which constitute that part of the crust of the earth, beginning with the Cambrian and ending with the carboniferous system. The exhibition will have to be made in the following manner:—A stand, to be constructed after the fashion of a dumb-waiter, having a table for every given system, upon which to place specimens of the different strata of the metal or metals found associated therewith, as well as of their fossil contents, all of which are to be labelled and arranged in exact scientific order.

Table No. 1.—Carboniferous system, embracing the coal measures, the mountain limestone, and the carboniferous slates.
Table No. 2.—Devonian, or Old Red Sandstone, embracing the yellow sandstone, red conglomerate, and grey dagstone groups.
Table No. 3.—Silurian system, embracing the upper and lower silurian groups on the Ludlow, Wenlock, and Llandovery series.
Table No. 4.—Metamorphic, or Non-Fossiliferous system, embracing the clay-slate, mica schist, and gneiss groups.

In collecting the specimens special care must be taken to show by marks not only their order of super-position, but how a piece of gneiss taken from the side of a lode containing a massive and rich deposit of ore may be distinguished from a piece taken from where the lode may be less productive, and that from a piece where the lode shall be barren, and so on throughout every strata in the systems referred to. There are many reasons why this particular mode of enquiry should be adopted; but the chief reason is that the teacher might have all the facts produced before him on the table for analysis

and synthesise, so to speak—a mode of operation which could not fail to instruct men's minds in what has not inaptly been styled the science of mining. THOM. BUNAGAN.

Wheal Caroline, Cornwall, Feb. 18.

WHEAL GRENVILLE.

SIR.—Having good reason for believing that the prospects of Grenville are even better than described in the City Article of the Journal, I was rather surprised at the price of shares remaining about the same, until I learnt from enquiry in the City a few circumstances that explained all; and as I understand the practice that affects Grenville is pursued in all mines, and is one which involves a great legal question, I ask permission to refer to it. It is this:—months ago a large number of shares were bought by parties in the market at 6 to 6½, and when the "account-day" arrived, not being able to pay for them, they borrowed money upon them,—pawnd them, in truth. And though it is bad enough to have shares always hanging over the market, and preventing its rising, it is made much worse by the practice said to be existing—viz., that those who take the shares as security for money advanced lend them out again for another consideration; so that as fast as the demand arises the "bears" sell shares, knowing they can borrow them to deliver, and then their interest is to keep down the price by every means in their power.

Here arises the legal question.—If I borrow 51. per share upon 100 Grenvilles, or any other stock, does not the lender, when he transfers the security into his name, become a trustee of the property, and has he any right to transfer it to others for a pecuniary consideration? By which means the whole property of the company is injured, as well as mine individually. The practice here complained of was carried on extensively also in East Wheal Caroline shares.

Grenville, if your readers will take the trouble to have the mine examined, as I have they will find much better in prospect than yet described; and with the erection of 48 heads of stamps will return at least 35 tons of tin per month, which, at 701. per ton, will produce 25,050, and a profit of 10001., or 10s. per share quarterly, being 40 per cent. on the present price, and 20 per cent. on 101. per share. The stamps and engine have been purchased, and if my co-adventurers will come forward, and make a call to pay for them (15001., as calculated as sufficient), they will in six months see my predictions verified. With at least 20,0001. of tin already discovered, and ends daily laying open more; 16 heads of stamps, working less than half time, produce 8 tons of tin per month, therefore 32 heads, working full time, would yield 32 tons; it may be said, and truly, that only the best of the tinstuff is being stamped now; but Grenville tinstuff generally is rich beyond the average of mines; and, therefore, supposing the picked stuff now stamped is equal to 5 per cent., I am taking a low view when I say the average percentage of the tinstuff is 2 per cent.; and as 32 heads can knock out 40 tons of stuff per day, that would be 30 tons of tin per month; and 48 heads would do considerably more, very little cost.—Feb. 12.

PHILIP GRENVILLE.

*The above letter reached us too late for insertion last week.

EAST WHEAL GRENVILLE, AND NORTH DOWNS.

SIR.—The imbecile attempts made in the Journal to injure the "Cautious Man" are truly laughable, and particularly so the one of last week. It, however, only proves how hard up these men are for some excuse to lug my name in. What could this man (who signs his letter "One who has learnt wisdom by his own folly") be thinking of when he penned his effusion? Did he think at all? I fear not. It surely could not be a broker who wrote it; and yet it is difficult to believe that any speculator would attempt to injure me for no reason. Now, he knows as well as I do that this 931. was received for a small parcel of copper ore, and that the principal returns from the mine are derived from the sales of tin; also that for every 1001. worth of copper ore there is 6001. worth of tin sold. At present the mine returns but a small quantity of copper ore, and this of very low produce; but that the quantity will increase and the quality improve as the mine gets deeper there cannot be much doubt about. If the man had asked the expense of returning both the tin and copper in the quarter, there would have been some sense in the question, but to confine his enquiry to the copper is simply ridiculous. Most tin mines contain both copper and muddle, which must be raised whilst opening them. If, therefore, a small lot of muddle were sold, this man might with as much propriety have asked how much it cost to raise it, and try to make the public believe that the whole of the money spent in the quarter was for returning it. As I before stated, the question is a barefaced one, but which, doubtless, is put to serve some purpose.

He says "the price of the shares has fallen." True; but how can I help that? Did we not see Devon Great Consols fall to 3601. some time since, without any falling off in the mine? and have we not lately seen such sterling mines as the Wheal Unity, South Crofty, and Wheal Grenville fall 50 per cent., and yet the mines looking better than they were before the fall? They have partly recovered itself, and so will South Crofty and other good mines, particularly East Grenville.

I have nothing to do with the market price of a mine, as whilst there are so many foolish speculators in existence good mines will be totally neglected at times, whilst rubbish will be eagerly sought after, to the broker's advantage, and the fool's ruin.

As regards East Grenville, let any respectable agent in Cornwall be selected to inspect the mine, and it will be found that it is one of the most promising speculations in the county, but parties must not be frightened out of their shares because the price drops; let them rather act on my system—increase their interest, as good mines generally recover themselves, provided the first purchases are made at reasonable prices. I do not refer to those in which the shares are selling at a few shillings each, as here the speculation being very great all may be lost, or a great deal earned. With such mines it is a perfect lottery, and must be entered into as such—one price amongst a hundred blanks. A selection of a dozen mines such as Pendennis Consols, South Crofty, North Downs, East Grenville, &c., may be made at reasonable prices, where the chances of success are very great, and the risks but trifling.

To return, however, to East Grenville, I will state that it was not my intention to have written a word in favour of the mine, well knowing that it will tell its own tale, but in reply, and in self-defence, I am compelled to do so. Listen, then, to the following:—On account of the erection of the steam-engine the mine has scarcely worked more than two months during the last quarter, and in that time between 6001. and 7001. worth of tin and copper has been sold, and a call has just been made to pay for the engine, &c. At the time I wrote the letter the shaft and ends are worth 401. per fathom, and the slopes 411., together 811., and other improvements are daily expected. Compare this with other young mines, and then let reason say if such a mine should be neglected, in order that well-puffed and worthless trash should be supported? So long as this system lasts certain brokers will thrive, and foolish speculators lose their money. Reverse it, and the reverse will be the result. See how the system works. A run takes place for a day or two in a particular share (it does not matter whether the mine be worth a rap or not), some knowing ones are buying up the shares, and clients are advised also to buy, and if they have no ready cash, they are persuaded to sell any good stock they may have, in order to raise the cash. The good shares are sold, the rubbish is bought, and it is ultimately discovered, when too late, that the knowing ones have been adding their stock on the poor unfortunate dupes. Yes, the knowing ones were buying shares by fives and selling them by fifties.

Sell good stock to buy still better stock by all means, but to sell it to buy rubbish, simply because there happens to be a run on the shares, is madness. This is one reason why such good mines as I have before mentioned decline in price; another is, that many brokers are not particular enough as regards the respectability of their clients, and buy shares for people who are all but penniless, which on the account-day they are compelled to sell to the highest bidder, when (as frequently happens) the shares are not in demand. By these means down the price goes, and it is no easy matter to get it up again.

The above is my reply to the man whose letter appeared in last week's Journal. I am really getting tired of replying to such pigmies; there is no honour to be gained by breaking a lance with such men, and, therefore, for the future, unless more formidable opponents come forward, I shall treat their effusions with silent contempt. This week I will expect another "curiosity" to exhibit himself, as my letter respecting North Downs appears to have given offence; whether on account of my putting a stop to the nice little game the "bears" were playing, or on account of my remarks respecting "contagious" and "the loan of shares," I know not, nor do I care. If these men expect me to keep quiet when I hear of such vile attempts to knock down the price of shares in any mine in which my friends or myself hold an interest they are very much mistaken. I repeat that a report was industriously circulated that the discovery in King's shaft was simply a stone of ore, and that, before I sent Captain Henry James to inspect the mine, and if these men now say "that no inspector ever stated it," why the worse for them, for circulating such barefaced falsehoods.

A discovery such as that recently made in North Downs is technically called "a squat of ore," but a "squat" that is worth 281. for three feet only, or at the rate of 501. per fathom, is such a "squat" that many men would be delighted to see the tenth part of it in their pet valueless mines; it would be a perfect god-send to them. I saw one report, and, with the exception of this discovery (which is the main point in dispute), it agreed pretty nearly with that of Capt. Henry James. It described the discovery as a squat of ore, but placed no value on it. I considered it very strange that both the agents of the mine and my own agent should place such a high value on it, and yet that this agent should say nothing at all about it. I repeat that it was strange. Some parties may say it must be driven on before the value can be ascertained; but this is not usually done, if ever. The value is named as soon as the ore is discovered, and captains of mines seldom err in the value they place on it; and, as for its continuance, no one can say anything about it—they can only judge as to probabilities. It is this uncertainty that makes mining such speculation. When King's shaft is sunk a fathom or two deeper they will commence driving, and we must hope that the lode will continue as valuable as appearances lead the agents to expect. As I stated in my last, the price of shares cannot go much lower, whilst a rise of 200 or 300 per cent. may any day take place. Since my last letter Captain Henry James has written me "that he thinks it very probable the east and west lode will be found productive when seen to the east of the cross-course, and that the ore is making in the east and west lode up against the cross-course." Let shareholders in North Downs have patience for a short time longer, and pay no attention to the croakers, who are merely "bears" in disguise. A CAUTIOUS MAN.

"BROKERS' ADVICE"—THE GRYLLS DISTRICT.

SIR.—In last week's Journal there appears a letter signed "Fair Play." If it had been signed "Foul Play" it would, in my opinion, have been more consistent. Allusion is made to a remark made by a broker, relative to Wheal Grylls being an excellent investment, and likely to pay dividends for many years to come. Presuming that I am the party alluded to, I now reiterate the same statement, and if the writer of that letter, with all his pretended knowledge of the Grylls district, is prepared to back his opinion to the contrary, I will give him an opportunity of doing so, by purchasing the dividends on fifty shares in each of the following mines for five years to come, at a fair rate of interest on the present price of the respective shares. I will select Wheal Grylls, East Wheal Grylls, Great Wheal Grylls, and Grylls Wheal Florence, and will give a guarantee for the fulfilment of my part of the contract. Anonymous attacks, either on mining property or an individual, are at all times despicable, and utterly unworthy of notice; and, so far as I am personally concerned, I should not have deigned to notice the ebullient envious feeling of the cowardly writer of the letter in question. If Mill-pool and Trevelyan have been so mismanaged as not to have given profits to the shareholders, I do not consider that any reason why the Grylls Mines, under the most unimpeachable management, should be placed in the same category. For the information of those who are interested in the district, I would observe that the Wheal Grylls bottom level is 80 fms. deep, and the lode continues to be profitably productive, and still opening up profitable tin ground, while above the 80 fm. level there are many thousands of fathoms of tin ground already laid open, sufficient to give good profits for

many years to come. I say this on the authority of agents in whom the whole of the Gyrils shareholders place the most implicit confidence, and they have proved themselves well deserving of it. If the brokers alluded to were advocating some specious scheme, instead of the most legitimate mining properties ever introduced to the public, they would deserve to be reprimanded by the pen of any writer, much less that of a painter. Disappointments, however, are wont to stir up envious feelings, and to these feelings I attribute the cause of the insertion of the letter in question. In conclusion, I would advise the writer of that letter (who is so profuse in his advice to others) to be more careful himself in the selection of mining properties than he has hitherto been. His friends may then be enabled, like the shareholders in the Gyrils Mines, to congratulate each other, and be convinced that mining is profitable, instead of being disappointed (through want of judgment) in almost everything he has been connected with.

EDWARD COOKE.

THE HAVAN MINES.

Sir,—Nothing was further from my mind than to cast the slightest reflection on the management of Capt. Charles Williams, with reference to Havan. Possibly, I was not sufficiently explicit in my report. What I meant to say was that, owing to the inclemency of the climate, and want of accommodation for new inhabitants, the price of work was necessarily high. My omission was that I did not convey the meaning that these prices would be reduced in the course of time—in other words, that economy would be effected when the arrangement for the labourers had been rendered more convenient and less costly to them. I am sorry that my words were capable of bearing a different interpretation; and I feel quite satisfied that Capt. Chas. Williams is entitled to praise for discovering the ore, and the skill with which he has laid out the works in this and the other mines I have examined under his management.—Feb. 16.

MATTHEW FRANCIS.

TRUTH'S ECHOES, OR SAYINGS AND DOINGS IN MINING.

The Mining Share Market has been rather animated this week, not only from the fair amount of business done, but from the enquiries for leading dividend mines, and the fluctuations which have taken place in others. Some of the progressive mines have shared in the various changes; but, upon the whole, an average amount appears to have been transacted, with a general tendency to improve.

DEVON GREAT CONSOLS have been in demand, and some shares have changed hands. WHEAL SETONS considerably advanced, in consequence of a reported improvement in the mine, but have since receded. CLIFFORD and NANGLES have been rather extensively dealt in, but with variations in price. WHEAL HULLERS have been offered at lower rates, and remain less firm. WHEAL BASSET and EAST BASSET have been in request, and some transactions have followed. NORTH BASSET and TINCROFT have changed hands, and left off weaker. COOK'S KITCHEN and STRAT PARK have been rather quiet. EAST CARR BREA and GREAT SOUTH TOLGUS have been done at lower rates. CAMBRIDGE VEAHS have been quiet. WHEAL GRENVILLE has been in better request, and slightly improved. EAST GRENVILLE and GREAT HOPE have not been active, although some dealings have taken place. NORTH TREKERRY has fluctuated, but shows a tendency to improve. NORTH DOWNS and NORTH ROSKEAR have changed hands at minimum rates. NORTH CROFTS are slightly firmer. ST. DAY UNITED and WHEAL KITTY (St. Agnes) have been done at lower rates. EAST ROSKEAR has been in request at improved rates. GREAT WHEAL BURY has been largely dealt in, and likely to advance. WEST CHIVERTON and CHIVERTON have been extensively dealt in, and prices have consequently improved.

SOUTH CARADONS have been in request. EAST CARADONS have shared largely in the transactions of the week, and prices well supported, in anticipation, probably, of cutting the lode in the 80.—MARK VALLEY is slightly better. GLASGOW CARADONS are offered at lower rates. GONAMARA and LUDCOTT have been in good demand, at improved prices. WEST CARADON, THELANWY, and MARY ANN are offered at lower figures. HUNTERDOWN and DANES WALKS have fluctuated. NEW HUNTER TON and VYRRELS have been in fair request. EAST RUSSELLS have varied, but in request at minimum rates. WHEAL CREBONS have been extensively dealt in, at improved rates.

EAST LOVELLS have been, as usual, largely dealt in, and quotations of a weaker tendency given. A sudden desire to sell took place on Thursday, but a more favourable change followed. GREAT WHEAL FORTUNES have receded, and more freely offered. THEWOLLS have been done at nominal figures. WHEAL GRYLLS and EAST GRYLLS have been fairly dealt in; and GREAT WHEAL GRYLLS, with FLORENCE WHEAL GRYLLS, have shared largely in the transactions of the week. PROSPECT UNITED are freely enquired for, attended with some fluctuations. NEW ROSEWAINES have improved, and continue in request. PROVIDENCE MINES have been done at lower rates.

EAST CARADON.—Caunter Lode: The 60 east is worth 127, and the 70 east 101, per fm. New Lode: The 60 east is worth 51; this lode is cut through in the eastern cross-cut, where it is worth 127, per fm.; the 70 east is worth 101.—South Lode: The 60 east is worth 51, per fm. From the increase of water in the 80 cross-cut south, it is expected they are near the lode. The sale of 145 tons (comprising) of ore, sold on Thursday, realised 345s. 1s., the produce of one month.—MARK VALLEY monthly sale, of 411 tons of ore, realised 1259s. 10s. 6d., on Thursday.

HAWKMOOR.—Although this mine has not proved as productive as anticipated, still with perseverance and further development it is to be hoped that some important discoveries will yet be made. Surrounded as it is by Devon Great Consols on the north, and Old Gunnis Lake to the south, Clitters on the west, and Bedford United on the east, with Devon Consols great cross-course running through the sett, it is believed that in opening east and west of this cross-course a rich lode will yet be found. The richest point alone, in the eastern portion, is the 12 fathoms level and west continues above the same, worth 41, per fathom; the eastern stopes has improved, and now valued at 101, per fm., the others are worth 67, and 77, respectively. The 20 east is still in a promising lode. The north shaft is cleared, and in working order. A parcel of stuff is ready for sale.

ST. JUST CONSOLS: An improvement in the Guide has to be noticed, from which they are now breaking some rich rocks of tin; the lode is of an unusually large size, and the present depth is about 6 fathoms from surface. The 16 heads of stamps are amply supplied, and can break work enough for 16 heads more from its point alone. Therefore it is apparent, without further discovery, this mine will become permanently profitable on the completion of sufficient stamping power.—WEST CLIFFORD: It is gratifying to learn that the application for shares continues on the increase, and large numbers have been paid upon during the week, in accordance with the terms of the prospectus. The position of the mines, which comprise several former sets, is, without doubt, one of the best in the locality, having the greater portion of Clifton Amalgamated lodes traversing the entire length, which mines are opening out remarkably well, and paying regular dividends. The richest courses of ore in Clifton are in the eastern portion of the mine, going towards West Clifford. If rich neighbours have any influence or tendency to increase the wealth of a central mine, then the prospects of this company stand in a most prominent position, for some of the richest mines in the county are in immediate proximity, indeed surround it. That portion of the mine known as Ting Tang was formerly worked to a great profit, and not to any considerable depth. It is, therefore, anticipated that when this property is in full operation, with all the requisite machinery, which the ample means of the proposed company will establish, there is every reason to believe that West Clifford will be a prominent and permanent stand in the monthly Ticketing Papers, when many of our present productive mines have been exhausted.

WHEAL HOPE continues to hold out most promise, and will, in the opinion of most practical agents, make a profitable and permanent mine. They have a good lode in the bottom of the shaft, and some of the ends are worked at a profit, whilst the stopes and tribute department are yielding remunerative work.—SOUTH ALFRED CONSOLS: Arrangements are making for the immediate erection of a large and powerful engine, and it is expected that the engine will be at work in about three months. The prospects of the property are more than ordinarily encouraging. Taking into consideration the discoveries at Great Alfred and Alfred Consols, at a similar depth, with the same stratification, it is the opinion of the leading agents of the district that this mine will return sufficient ore to pay the cost of the engine in a very short period after erection.—EAST LOVELL: The shaft sinking below the 26 maintains its size and value, being still worth 100f. per fm. The tin in the 20 and has gone down under the level, leaving stopes in the back and bottom worth 40f. per fathom respectively. No change of value has taken place in the south lode. They will sell 8 tons of tin next week, raised within the month.

WEST WHEAL FRANCES.—Although this mine has not yet proved remunerative to the adventurers, still there are considerable prospects from the opening out of the deeper levels. The lode in the 85 fm. level end west is 5 ft. wide, and worth 167, per fm. for tin; 3 fathoms behind the end lode from wall to wall is 12 feet wide, worth 40f. per fathom; the 77 west is worth 117, per fathom. In stopping the backs of these levels a long run of new ground is fully anticipated, and great hopes are expected from the north lode, which is long and improved in accordance with the encouraging appearances of the different lodes at the several points of operation, and the geological position of the mine fully warranted. Still the highly promising appearance of two lodes which have been seen and partially opened, affords considerable grounds for encouragement, towards the intersection of which two cross-cuts are being driven—one in the 40 and the other in the 70 fathom levels, which, it is to be hoped, will reward the perseverance of the adventurers.

JAMES LANE.

From MR. JAMES CROFTS:—There, perhaps, never has been a period when the public are reaping more solid advantages from the purchase of mining shares than the present, the improvements in a number of mines, and the rise in prices, being unprecedented, whilst the position in which the market is placed by such untoward events as a very high rate of interest, and the disturbance of the market by a restless ambition, and the struggles created out of it, appears to go almost for nothing. Thus it may be asked, what would be the condition of the stock and share markets, and of mining in particular, as the most speculative item, were all the world at peace, and money cheap? Notable instances of the success of certain mines may be given in WEST and WHEAL CHIVERTON, which from 10f. and 7f. to 8f. a share respectively, when originally introduced on the market, have advanced to 65f. and 137, per share, and as it is said, and believed by many, have not yet reached the maximum price. The former of these mines, WEST CHIVERTON, will be found in the Dividend List with nothing paid, and two dividends declared of 15s. each up to last month, and since the return of capital as a percentage is thus far small, there must, of course, exist good reasons for concluding that increased returns of ore, and a great increase of dividends are assured. The latter mine, CHIVERTON, stands under the head of "dividends in abeyance," with 5f. a share paid, and is rapidly becoming a great favourite with investors, and may become still more so if, as is predicted, there is yet room for a very large advance. Amongst the other mines represented by "Chiverton" is EAST CHIVERTON, upon which good profits have been already realised by those who availed of the advance of 4f. 10s. to 9f. a share, and who are suddenly sunk in value, and now rest stationary at 43f. to 5f. a share, but so for some months, it is a fair inference that the two larger mines, being entirely independent concerns, create no sympathy with EAST CHIVERTON, and to judge of its market value, or a probability of an advance or the contrary in price, its merits must be separately considered. There are other Chivertons which make their way on the market by more or less means, but the real status of several of them has yet to be demonstrated. One important question is, perhaps, their connection or identity with the district of Penzance, in which the richest mines exist, or how far their success may eventually be influenced by dormant lead lodes of the late East Wheal Rose. Under any circumstances, there is high merit to those (and they have met with a splendid reward) who promoted and introduced the already successful concerns to the London market, and whatever the result, it is but natural that a number of other adventurers should be the consequence, the last of which is probably not yet launched, whilst instances of additional success will assuredly stimulate the promotion of others, and give employment to "cautious" men to analyse, and either approve or condemn, according to circumstances.

In the more miscellaneous class of mines there have been some good advances:—WHEAL CREBON, from 37s., 38s., and 1s. 6d. call on the 17th. GREAT WHEAL BURY, for a long period a very depressed share, is now realising 700f. per month profit, and a very large business in them. GREAT WHEAL VON, some two years since, was on the point of dissolution, and now sells in one parcel 75 tons of tin, value 5700f., and giving steady dividends. CALVEY ROCK from 4s. advanced to 6f. GONAMARA, 24s. to 44s. BRYNTAL, 5s., 10s., to 31s.; although, as is stated, certain "bears" are interested in checking the course of prices in the market, this share may become in a short time

very valuable. NORTH TREKERRY is paying in dividends 7s. 6d. per share per annum, which, at the price of the share, gives 15 per cent. They may be safely bought, it being a well-managed concern, and dividends may increase in the course of this year. TREKERRY is in considerable demand at 7 to 7½; whilst, twelve months since, they could scarcely be sold. BEDFORD UNITED still pay fair dividends, and at present prices are a most eligible share. OKEL TEN is an advancing mine, although the shares at present are free from excitement, probably owing to holders having paid a much higher price, and preferring to hold rather than sacrifice 30 or 40 per cent. of capital. The following is a list of merit, and deserves attention, as shares to buy:—GRENVILLE, THELOWETH, CLIFFORD, EAST LOVELL, SOUTH FRANCES, CAMBRIDGE VEAH, KITTY (Levant), TREKERRY, ROSKEAR UNITED, EAST BASSET, GRAMMERS, DEANS WALKS, and WYLLS, CANADON. The real merits of NORTH DOWNS have lately been under discussion, the balance of opinion being against the present market value being maintained. Similar opinions apply to FENDEEN; these, however, with whom the mine is a favourite, predicting dividends in a few months.

In concerns in which the writer is more directly interested the CENTRAL MINERS stands prominent. It is now stated that in a fortnight or month hence the horizontal engine purchased, and to be placed at Edgeworth's shaft, will be at work, when early results are anticipated as to the cutting into the Twelve Apostles lode; and whenever this shall be *unfailingly accomplished*, a very considerable advance must take place in the shares, which at present are flat, and, therefore, should be bought at 2½ to 3½. Few, however, offering the bulk having cost from 7f. to 8f. per share, and none of these holders disposed to sell at present. BRYNTAL HALL improves daily, and the few shares in the market cheap, when it is remembered that they were once 50f., and may, according to present appearances, again reach a much higher price than the present. The news from BEDOL-AUR becomes daily of more interest, and apparently a certainty in a short time of remunerative mining, a meeting of the shareholders was held on the 17th at the offices of the company, quite preliminary in its character there being only routine business to transact, but for the purpose of reporting progress. The agent's report, dated the 16th, will be found in another page of the Journal, from which it appears that the pulley-shaft is now down to nearly 60 yards, there having been 4 yards and upwards sunk in the last few days; and that when it is down to the 70 yards (in about one month) the Blyth vein will be intersected, in which, the agent states, "we can expect a good paying mine." The 50 yard level, north-east from shaft, is represented as "much more promising than when last reported upon, the vein being full of spar and good lumps of lead ore." Already samples have arrived of the lode at this shaft, which are pronounced by competent and experienced lead miners to be conclusive as to evidences of a rich mine, and that shortly, and, consequently, those who have availed themselves of the very reasonable price of these shares, in comparison particularly with many other new mines, have reason to be congratulated, especially as the few for sale must shortly command a much higher price.

From MR. HENRY GOULD SHARP:—The market for shares in British mines is very firm, and a considerable advance has taken place in the prices of West Chiverton, Chiverton Moor, Wheal Grenville, Wheal Crebbon, Wheal Seton, &c.—CLIFFORD AMALGAMATED have declared a dividend of 10s. per share, and are likely to give 15s. in April; shares have remained very steady, 38 to 38½. NANGLES close firm from 100 to 105. WEST CHIVERTON, in demand, and shares well close 54 to 55½. WEST CHIVERTON, in demand, and shares well close 54 to 55½. CHIVERTON, a large business doing, 13 to 13½, with an upward tendency. CHIVERTON Moor shares have been bought up for investment; they are very scarce, being firmly held; they close 5½ to 6½. EAST CHIVERTON, 5 to 5½, and quite neglected; these shares are the cheapest in the district; there are only 2000, and an improvement would put them to 10f. in a few days. GREAT WHEAL BURY shares are worth attention—4½ to 4½; the mine is progressing well, and the prospect is bright. WHEAL TRELANWY, 23 to 24, a good investment; the quarterly dividend was 15s. per share, and a balance of 1100f. was carried to the next meeting. PROVIDENCE, 45 to 46, in demand. EAST PROVIDENCE, 4½ to 4½, are well worth buying; the mine is looking well. WHEAL CREBON shares, quiet at 42s. 6d. to 44s., call paid. WHEAL SETON shares close firmer, at 177 to 180; EAST BASSET, 71 to 72½; WHEAL BASSET, 90 to 95, in demand; WHEAL BULLER, 38 to 43; these four mines are worth attention. EAST LOVELL, very flat, 8 to 8½. KITTY close, 24½ to 25½, excellent prospect, and shares well held. EAST BASSET, 32 to 34, and worth buying. KELLY BRAY, 8s. to 10s., are worth buying for a speculation. LADY BERTHA, 15s. to 17s., are deserving attention at the present time; the mine is looking well. The mines in the Gyrils district are quiet, but prices remain firm.—WHEAL GRYLLS, 27 to 28; EAST GRYLLS, 13½ to 14; GREAT GRYLLS, 43½ to 5; and GRYLLS WHEAL FLORENCE, 3½ to 3½. WORTHING, 17s. 6d. to 18s. 6d. There will be a further rise in the Chiverton district.

From MR. EDWARD COOKE:—The market has been more active than for many weeks past, and a large amount of business has been done in several of the leading mines. An advance in price has occurred in some instances, and among the mines that have been favourably affected are West Chiverton, Devon Great Consols, Chiverton Moor, and Wheal Grenville. The market for shares in British mines is very firm, and a considerable advance has taken place in the prices of West Chiverton, Chiverton Moor, Wheal Grenville, Wheal Crebbon, Wheal Seton, &c.—CLIFFORD AMALGAMATED have declared a dividend of 10s. per share, and are likely to give 15s. in April; shares have remained very steady, 38 to 38½. NANGLES close firm from 100 to 105. WEST CHIVERTON, in demand, and shares well close 54 to 55½. WEST CHIVERTON, in demand, and shares well close 54 to 55½. CHIVERTON, a large business doing, 13 to 13½, with an upward tendency. CHIVERTON Moor shares have been bought up for investment; they are very scarce, being firmly held; they close 5½ to 6½. EAST CHIVERTON, 5 to 5½, and quite neglected; these shares are the cheapest in the district; there are only 2000, and an improvement would put them to 10f. in a few days. GREAT WHEAL BURY shares are worth attention—4½ to 4½; the mine is progressing well, and the prospect is bright. WHEAL TRELANWY, 23 to 24, a good investment; the quarterly dividend was 15s. per share, and a balance of 1100f. was carried to the next meeting. PROVIDENCE, 45 to 46, in demand. EAST PROVIDENCE, 4½ to 4½, are well worth buying; the mine is looking well. WHEAL CREBON shares, quiet at 42s. 6d. to 44s., call paid. WHEAL SETON shares close firmer, at 177 to 180; EAST BASSET, 71 to 72½; WHEAL BASSET, 90 to 95, in demand; WHEAL BULLER, 38 to 43; these four mines are worth attention. EAST LOVELL, very flat, 8 to 8½. KITTY close, 24½ to 25½, excellent prospect, and shares well held. EAST BASSET, 32 to 34, and worth buying. KELLY BRAY, 8s. to 10s., are worth buying for a speculation. LADY BERTHA, 15s. to 17s., are deserving attention at the present time; the mine is looking well. The mines in the Gyrils district are quiet, but prices remain firm.—WHEAL GRYLLS, 27 to 28; EAST GRYLLS, 13½ to 14; GREAT GRYLLS, 43½ to 5; and GRYLLS WHEAL FLORENCE, 3½ to 3½. WORTHING, 17s. 6d. to 18s. 6d. There will be a further rise in the Chiverton district.

From MR. GEORGE BATTERS:—The market for Mining Shares continues

very active. The prospect of cheaper money, and the excellent prices now being obtained for metals, inspire confidence in the future, more especially as the bulk of investments recently made in mining shares have been in a class of securities likely to eventuate in great good, such as Devon Consols, South Caradon, Great Wheal VOR, Clifford, Seton, West Chiverton, Chiverton, &c. The sampling at West Chiverton for the month will be 80 tons of ore, and 60 tons of second crop, and the latter part is raised from driving levels and sinking winzes, and but little from stopes. The mine is being laid open for a great future, and the bottom of the mine never looked so well as at present; the 80 west, on Williams's lode, is valued at 100f. per fathom; the 80 east, 20f. to 4f. 2 winzes sinking under the 70, 70f. to 100f. per fathom; the 80 west, 40f. to the 80 east, 40f. to No. 2 winze, sinking below the 70, 40f.; other parts quite as good as when last reported on. These shares have risen to 65f., 70f., and must, on their merits, be considered one of the best in the Cornish district. Good progress is being made in draining the mine. The water is now nearly out to the 40, and it is expected now to see the bottom of the mine months before it was anticipated, when good returns of lead will be made. These shares are now 13 to 13½, and good to buy. CHIVERTON MOOR is attracting attention. A new 70-in. engine is being erected, which, when at work, will enable the management to speedily open on the West Chiverton lodes. Price of shares, 5½ to 6, with upwards of 8000f. in hand. CHIVERTON VALLEY, under the same auspices, and with prospects second to none in the district, at 5 to 5½, are worth attention. NORTH CHIVERTON Mine is looking well; the lode in the 170 east is improved to 45f. Price of shares, 5½ to 5½. EAST CARADON shares have risen to 23½. CLIFFORD shares have been in good demand, at 38f. NANGLES shares have risen to 36f. The changes in the market are otherwise unimportant.

GREAT DARREN.—I accompanied a deputation of gentlemen, connected with mining, yesterday over the floorings of the Great Darren Mine. Evidence of the new discovery and its extent appeared in every direction. On the upper flooring, the slides were filled with immense heaps, consisting of large blocks of silver-lead ore, showing by the size the great width of the ore, and the richness of the vein; many of these blocks measured 1 cubic foot upwards of rock, and were filled to the extent of one-third with ore. At present this ore is being drawn by horses, but the motive power for large drawing machinery is ready, and the apparatus will soon be fixed. The spalling or breaking up of this ore for the crushing machinery, again, testified to the large proportion of lead in it, and its solidity in the mineralised state. Carts were rapidly conveying this ore to the floorings below, where the crushing machinery was reducing it to the proper size for cleansing. We noticed that at the second jigging the ore was nearly quite clean; the round budder working the slimes also showed that the produce of the mine was from very rich ore. We visited the ore bin, and witnessed the commodity in its cleansed state; it seemed quite clean and bright, and from the quantity of silver it contained we ascertained it to be worth 20f. per ton. With reference to the underground workings, we found that the present price of raising this ore was 45s. per ton, but which, when a level was pushed under it to render it more convenient for stopping, would be reduced to 22s. 6d. per ton, or one-half, an economical result that, of course, will add much to the profits of the mine. We, however, found from enquiries and from looking into the accounts, that the cost now does not much exceed one-third part of the whole value of the ore. It is only necessary to add that the opening of the ground on this new body of metal is extending as fast as possible, and that the whole work presents a scene of unusual bustle and activity, predicting excellent results to the enterprising proprietors.

NEW MINING DISTRICT.—Messrs. Cain and Furness, of Liverpool, with other gentlemen of that town, have taken the royalties on the Cumberland side of the Duddon, on liberal terms from the Crown, and have commenced boring, with every appearance of success. It is believed that extensive beds of ore lie between Hobbarn Mines on the north and the Park Mines on the south.—*Whitehaven Herald.*

There are 24,226 miles of railroad in the Federal States, the cost of which has been \$1,025,115,742. In the Confederate States there are 8933 miles of railway, the cost of which has been \$240,886,473.

Mining Correspondence.

BRITISH MINES.

BEDOL-AUR.—T. Pierce, Feb. 16: The pulley shaft is now down 9 yards 1 ft. below the 50, on Simons's vein; the bottom of the shaft is very hard just at present; the vein is 2 in. wide, full of spar and spots of ore; we expect to have some change here daily; 10½ yards more sinking on the shaft will be deep enough to have 2 yards of cross-cut to intersect the Blyth vein, in which we expect a good paying mine. The 50, north-east from shaft, is much more promising than it was when last reported on. The vein at the foot of the level is from 4 to 10 in. wide, full of spar and nice lumps of lead ore, and the appearance of the vein is very favourable.

BILLINS.—F. Evans, February 17: The lode in the engine-shaft is small at present, though producing good stones of lead. I hope by next report to be driving out for the main lode, which has produced such large quantities of lead ore in the levels above. BOSCAWEN.—J. Edwards, Feb. 13: At the 80, driving west of Hunter's shaft, the lode is small and unproductive. The lode in the 70, driving west of said shaft, is about 2 ft. wide, worth for copper ore 30f. per fathom. The lode in the slope west of No. 1 winze, in the back of this level, is worth 20f. per fm. for copper ore. The lode in the 60, driving west of Hunter's shaft, is 20 in. wide, producing a little copper ore. The lode in the slope in the back of this level, west of No. 2 winze, is worth about 12f. per fathom. The lode in the slope east of No. 3 winze, in back of the said level, is worth about 14f. per fm. The tribute pitches are looking just as last reported.

BOTTLE HILL.—J. Eddy, Feb. 15: The stopes east and west of Williams's shaft are without change. We shall lay open a round east of Williams's shaft, so as to commence stopping in the back of the 24, east of shaft, by Monday next; the lode in this level is large, varying in size from 3 to 6 ft. wide; the ground is easy for working. I intend as soon as we commence stopping to put one of our stamps (12 heads) to work on it; this will soon test the quality of the lode, far better than a mere sample. The small quantity of stuff stamped which has been raised from a shallower level I consider has not only paid its way, but left a profit. The samples is sent off to the smelters, computed from 5 to 8½ tons.

BRYNTAL.—J. Lester, Feb. 17: The ground in the end of the 52, driving towards the ore ground above, is much better for progress. I expect that in a short time the men will intersect the north lode. The piece of the lode taken down behind the outcrop the 40 west is not so good as last reported. The stopes in back of the 40 still continue to yield quite 20 cwt. of lead ore per fathom. We have not met with anything of value by our cross-cut through the lode west of long winze in the 27. We sold on Tuesday 50 tons of lead ore at 15f. 3s.

BRYNTAL.—J. Rosch, Feb. 18: Up to yesterday afternoon the lode in the 20 west continued good (just as last reported), when the lode became disordered by boulders of grit-sand protruding from the south wall. To-day it is improved, yielding from 8 to 10 cwt. of ore per fathom, and has every appearance of becoming much more valuable in a short time. The drive of the level east of cross-cut, on the north part of the lode, has been resumed this week. I hope in a short time to meet with the ore ground dipping from the levels above. On Monday next I shall be in a position to cut a winze, to sink on the ore under the 20 fathom level west. Our prospects are good.

BULLER AND BASSET.—Wm. Fobes, S. S. Bice, Feb. 12: The 80 east is driven 65 fms. from shaft; at present the lode is 3 ft. wide, composed of mottled, flinty, and spar. At times we find it contains a little copper ore. The nature of the ore is very unexceptionable; price for driving, 4f. per fm. In the 60 west we have driven nearly 100 fms. from shaft; the lode has mostly proved large, and occasionally given evidence for yielding copper ore, yet we have not been able to obtain a material change to value. One working is now on the north part of the lode, and, judging from its present appearance, we recommend a further trial; the ground is good; price for driving, 4f. 5s. per fathom. South Lode: In the 80, west of the cross-cut, we have driven 9 fathoms; the lode is chiefly made up of peach, mandic, &c.; price for driving, 11f. 10s. per fathom. Should the ground become easier, there would then be a better prospect of finding results arising from working, and hope before the time of the next meeting of adventurers there will be a successful change in the value of the mine. Our estimate of cost for the next four months may be set down at 120f. to 130f. per month.

CAMBRIDGE CONSOLS.—W. Roberts, Feb. 17: No improvement to notice in any of the bargains since reported for sale on the 10th inst.

CAMBRIDGE CONSOLIDATED (Gold).—Thomas Martin, W. H. Pascoe, Feb. 16: No. 6 Lode: The 10 is driven 3 fms. 3 ft. east of engine-shaft; the lode is about 3 ft. wide, enclosed by two well-defined walls, and composed of quartz, carbonate of lime, copper, and iron pyrites. Every search will be made by us to find visible gold, but we do not expect to reach the shoot gone in the adit level for some fathoms yet. Samples are frequently washed, and show the lode to be auriferous. We have now commenced to drive a 10, west of the engine-shaft; the lode at present is divided into branches, all of which are mineralised, and, judging from the lode in the adit level 10 fathoms above, we have every reason to expect that in the course of a few feet further driving we shall have it greatly improved both in size and character. In driving the No. 2 level the main part of the lode was found to be to the south; we have, therefore, put the men to drive a cross-cut to intersect it. The No. 2 shaft is completed 8 fms. below surface, the water-wheel at work, and the men have commenced to sink; it is a very promising and well-defined lode, fully 4 feet wide, and samples when washed always show gold. The carpenters are busily engaged making a horse-whim for the No. 3 shaft. The Wellington and North Vignette lodes are very large, fully 8 ft. wide, of a very promising quartz, with spots of lead, and copper intermixed throughout, and samples from both places never fail to produce gold.

CARADON CONSOLS.—Wm. Rich, Feb. 15: We are carrying the north part of the lode in the 80 west, which is increasing in size as we leave the cross-course; the lode is now 3½ ft. wide, looking strong and kindly. The engine lode west is larger, with more ore than it has shown of late. There is no alteration to notice in the 80 east on this lode. We have broken good stones of ore in driving on the south lode during the past week.

CARDIGAN CONSOLS.—James Sanders, Feb. 15: There is no change since my last report, with the exception of the 10 east, where an improvement has taken place; the level has been poor for the last 3 or 4 fms., but I am glad to say it is very much improved in the last day or two, and is at present worth 1½ ton, or 20f. per fathom for copper ore. This being our setting-day the following bargains were set:—The 20 drive east, by six men, at 8f. 10s. per fm.; the 10 to drive east, by six men, at 8f. per fm.; the cross-cut to drive north, by two men, at 6f. per fm.; to stop above the 10, west of winze, by six men, at 4f. per fathom; the stop above the 10, west of winze, set; to drive east from Sanders's shaft, by six men, at 9f. per fm. Our sampling to-day is 40 tons of copper ore.

CHIVERTON WHEAL HOPE.—W. Hancock, Feb. 13: I have to-day made a careful survey of this extensive mining sett, which is situated in the parish of Penzance, and about 1½ mile to the north-east of the celebrated West Chiverton Mines—the latter need no comment on their productiveness. It is bounded by and adjoins on the south that promising mine, Wheal Hope. In looking into the burrows at surface, the west end, and the elvan courses running parallel with the lode, which is a good feature in the production of mineral, and taking into consideration the amount of blende and lead which has been returned from so shallow a depth, only 30 fms. below adit, or 57 fms. surface, and having three parallel lodes, and a shaft sunk about 30 fms. below the adit in the middle of the sett. I cannot but strongly recommend this piece of mining ground as a good speculation, especially when we see the attention this district has present commanding. For the prosecution of the mine I would recommend you to erect (say) a 30-inch cylinder engine on the level in the sett, so that you may command these three lodes, made mention of, by short cross-cuts. The indications, such as I consider to warrant a speedy development, and, if properly carried out, I have no doubt you will open up a good property. And what still strengthens my opinion of it having also seen a report from the Duchy agent, wherein he states the lode in the 30th level, when abandoned, was worth from 10f. to 15f. per fathom for lead.

J. Hampton, Feb. 13: I have examined this large sett; it embraces the ground and lodes existing at the eastern part of Backwell Consols, and runs up to John Wheal Hope. I never saw any part of the mine underground, but I have seen a letter from a respectable agent, who inspected the mine when it stopped, and he valued the lode at one place to be worth from 10f. to 15f. per fathom. I understand that from the 20th level alone from 10,000f. to 12,000f. worth of lead and blende has been sold, and, looking at the burrows, and other surface indications, I believe it to be a piece of ground well deserving a spirited trial. There are two tin lodes at a short distance from the lead lode, which can be worked by short cross-cuts, and as two or three fine elvan courses traverse the entire length of the expected lode, which is a good feature in the nature of the lode, and the fact that there will be a yield of mineral corresponding to these indications, especially as the lodes are proved to be productive.

CHIVERTON WHEAL ROSE.—J. Phillips, Feb. 16: Milled's Lode: The lode in the eastern end is still very large and kindly, from 8 to 10 ft. wide, composed of peach, mandic, and lead, but not enough of the latter to value. The western end is much the same as when last reported on, also the north end. The lode in the ventilation shaft is still 3 or 4 ft. wide, showing beautiful gossan and quartz. The engine is all on the level with the exception of two small lodes.

CLARA UNITED.—J. Lester, Feb. 18: The lode in the 40 east is about 3 ft. wide, mixture of blende and lead ore. In the 40 west we have not taken down the lode during the week; we shall do so in a few days, and from this then promising appearance expect to see an improvement. We have put down a larger lift of pumps from the 30th to the 40, and shall now be able to keep the mine in working order with ease.—DOLVEN: The cross-cut adit is now extended 11 fms. 4 ft.; ground without alteration. The mine is still at work part of the time, but the parties working it even find it more advantageous to resort to market value than to work the mine.

George Green: Report on the boring-machine working continued.—February number of holes bored 2 feet deep, four; Feb. 10, ditto, 2 feet deep, six; Feb. 11, ditto, 2 feet deep, eight; Feb. 12, ditto, 2 ft. 1 in. deep, six; Feb. 13, ditto, 2 ft. deep, four; one 2½ ft. deep. Ground driven in the week in level 8 ft. x 6 ft. x 5 ft. Average cost of driving one hole from 15 to 20 minutes. Number of men two, and only one core. CLEER'S HILL.—S. Cooke, Feb. 18: We have cleared about 10 fms. more of the level, and have now another old shaft, where we find that the old men have stopped some of the backs, but we find the lode to be standing round this shaft, with very good ground for tin. I hope by another week that we shall see to what extent the old men have driven on the course of the lode. I have also commenced clearing one of the old winzes where we are told there is a good back of work standing. I have also taken some lead of the old men's attle to a borrowed stamps, and I find it to yield more tin than we anticipated. We have thousands of loads of this sort at surface, which will pay well stamping as soon as our stamps are erected.

CHIVERTON CONSOLS.—J. Seymour, Feb. 16: The ground in Ward's shaft is much superior for excavating than was the last report on. The Dumping lode in the stopes, stopping from the winze, is producing a good deal of both tin and copper, and well for working, and leaving good profits. The pitches are much the same as last reported on. I have placed four men to drive on the 21, to get under the winze shaft, to, to unwater it; this level is being driven in the country for 2 or 3 fathoms, to get a piece of ground standing by the shaft, the lode being in the shaft at that place. The water is daily increasing in the 10, and we expect to see Currie's lode here shortly. On Tuesday we expect to sample about 20 tons of what is called crop ore, and about 20 tons of other ore. We have three important points to come off in about three months—the cutting of the Dumping lode, in the 30; the C lode, in the 10 and 20; and I fancy a good level west of Ward's shaft, in the 21—we call this a 21 fm. level, it being 7 ft. deeper than the 20, at Dumping shaft.

CUDRA.—F. Puckey, E. Dunstan, Feb. 18: In the 105 fathom level west we are driving in the kilias by the side of the lode; ground easy for progress. In the 100 level, east of cross-cut, the lode is 4 feet wide, producing work of a low quality. The same level west no lode has been taken down since last reported on. The lode in the 75 fathom level west, and also in the stopes in the back and the bottom of this level, no lode has been taken down during the past week. In the 60 fathom level west the lode is 3 feet wide, and worth 10f. per fm. We shall give a detailed report next week for the adventurers' meeting.

drives 80 ft. per fm. In the 162, driving west of Metal shaft, the lode is 1 ft. wide, worth 200 per fm. In the 162 driving east of Metal shaft, the lode is about 3 feet wide, worth 200 per fm. In the 142, driving west of Metal shaft, the lode is 4 feet wide, worth 400 per fm. Our stopes through the mine are looking well.

GUNNIS LAKE.—J. Modda, Feb. 18: Since communicating the engine-shaft with the adit level, we have commenced driving east and west about 23 fms. above adit, or 90 fms. below surface; the western level is driven 6 fms.; lode increasing 6 feet wide, and the east level yielding 3 tons of good quality copper ore per fm., and the remainder good quality tin; in the present end the lode is of the same value; price for driving 30 ft. per fm. The eastern level is extended 9 ft., the lode producing a little tin, and 1 ton of copper ore per fm., of good quality; in the present end the lode looks likely to improve largely. We have four stopes working on the Bonny lode; in each stope the lode is large, and turning out fair quality tinstuff.CREASEDA LODE, in the adit level east, is at present 3 ft. wide; we have, therefore, put the men to cross-cut south on a cross-course nearly intersecting to prove whether the lode is standing in this direction. We are getting on with our surface operations as fast as the nature of the work will admit.

GWYDNER PARK CONSOLS.—W. Smyth, Feb. 18: In the Gwynn Liffan deep adit, on east and west lode, the lode is about 6 inches wide, composed of spar, mundle, and blende, with spots of lead ore, and letting out a good deal of water. The lode in the cross-end is still small ore, and the ground tight, but letting out a little more water. In the end, on shale lode, the lode is about 3 ft. wide, principally composed of floukian, spar, and blende, and of ore. The lode taken down the 15 stopes this week.

HAVAS.—J. Modda, Feb. 18: The 10 ft. lode in the 40 is divided into a very rich lode, composed of blende, carbonate of lime, copper, and lead ore, yielding of the latter 1½ ton per fm. The 10 east is suspended, worth 1 ton per fm. No. 1 stope, in back of Seton's adit, is about 1 ton per fm. No. 2 is in a fine course of ore, worth 1½ tons per fathom. No. 3 worth 1 ton per fm. No. 4 from 10 to 12 cwt. per fm. The cross-cut, north from the winze, is yielding saving work for dressing, but is not extended into the best of the vein. The cross-cut south is much the same as for some time past. I am glad to say that our crushing-mill is nearly completed, so that we shall be able to commence crushing on Wednesday afternoon. If the weather be favourable, we hope to get all our floors, sheds, &c., completed in a few weeks.

HINGSTON DOWN CONSOLS.—T. Richards, Feb. 17: There is no change to advise you of this week. The 110 fathom level, west of Morria's shaft, never looked better than at present—a magnificent course of ore, worth 1300 per fathom, with every prospect of continuance.

HOLLOW MARSH WOOD.—J. Vercoe: The machinery is all completed, and working—engine-shaft being sunk with all speed. The branch of engine-shaft referred to in my last is increasing in value as they sink; a second one has come into the shaft, about 1 in. wide, solid copper; this looks well, and no doubt are droppers to a rich lode. The killas is as fine as can be seen in any part of the country, and in about eight weeks the lodes will be cut at the 15, where it is expected a fine course of ore will be met with. Looking at all the facts connected with this young and highly promising mine, they are such as almost to ensure success. The ground is so soft that the engine-shaft is being sunk for the small sum of 60 per fm., which speaks for itself. The hardest work is to get the stuff to surface.

HOLMBUSH.—F. Pryor, F. Pryor, T. Woolcock, J. Horlase, Feb. 12: All the pit-work, &c., at Hitchin's shaft from the 175 is drawn up to the 60, and at Wall's engine-shaft to the 70, and it will take us about three weeks more, with good speed, to bring the remainder of the materials to surface, after which we shall soon be in a position to have a large. The water is up to the 125.

LADY BERTHA.—Capts. Harper and Metherell, Feb. 16: In the 53, west of shaft, we are just now driving by the side of the lode; when last taken down it was from 30 to 40 fms. deep, composed of ore, mundle, and quartz, worth of the former 5 tons, or 300 per fathom. The ground in the rise above the back of this level is moderately easy, now up about 6 ft.; no lode has taken down here since we commenced. The lode in the 53 east is from 1½ to 2 ft. wide, composed of mundle, peach, quartz, and ore, worth of the latter 60 per fm. In the 41 east the lode is (so far as seen, 2 ft.) composed of peach, mundle, quartz, and some good stones of ore. The 30 east continues to let down a quantity of water, which causes us to hope for some improvement in the lode in this and shortly. The ground in the new eastern shaft, sinking below the 30, is much the same as for some time past. The tribute department continues to yield much as usual.

Capt. Harper and Metherell, Feb. 18: Our different operations are being pushed on as fast as possible. The ground in the new eastern shaft is harder for sinking than when we last reported. We have no alteration to inform you of in the appearance or character of the lode in either of the ends or pitches in any part of the mine since our last report.

LONG RAKE.—F. Evans, Feb. 17: There is no alteration in the 60 west. In the 60 east there is a large lode, worth from 10 to 15 cwt. per fm. The 70 east will produce about the same, and the 80 east is worth 10 to 15 cwt. per fm. The 90 east is nearly equal in value; this has been the best level for lead ore we have opened. The 50 east and west produces saving work for lead; we expect an improvement in both of these levels, as we have run of lead which must be cut into by extending them, particularly eastward. The mine is improving, and if the 80 improves in proportion to the 70, we shall soon have a good paying property.

MINERA UNION.—W. T. Harris, Feb. 18: The 80 yard level is now extended to the required point for beginning the cross-cut to Brabner's shaft, which has been done, and the ground is now being driven, and the lode is now showing, and producing excellent stones of lead, and improving.—Williams's Shaft: The driving of the 40 yard level south has been suspended, and a winze commenced in bottom of the level, the lode is poor for lead at present, but I expect an improvement as we sink deeper. The branch going east out of this level is 1 ft. wide, with a little lead. No. 1 pitch, in bottom of this level, is worth 10 cwt. of lead per fm. No. 2 pitch is worth 5 cwt. of lead per fm. No alterations in any other part of the mine.

MOLLAN'S.—T. Bennett, Feb. 17: The lode cut in the 62 east is 3½ ft. wide, producing grey ore, and mundle. The tribute department continues to yield much as usual.

NEATHER HEARTH.—W. Vipond, Feb. 18: The lode cut in the 62 east is 3½ ft. wide, producing grey ore, and mundle. The tribute department continues to yield much as usual.

MORRIS SILVER-LEAD.—J. Roach, Feb. 18: I have altered the bearing of the cross-cut, and we are now driving a few degrees north of the usual course; a short time we shall reach the point in the 26 (under the large deposit of barytes in the 16), where, in my opinion, our hopes will be realised.

THE NANGLES.—J. Howe, Feb. 17: The lode cut in the 62 east is 3½ ft. wide, producing grey ore, and mundle. The tribute department continues to yield much as usual.

NEW CROW HILL.—W. Trelease, Feb. 16: Saturday last was our measuring day for the past and settling for the present month, and the following are the particulars thereof: The 60 level, in the 60 east, is worth 10 to 15 cwt. per fm.; the 70 level, in the 70 east, is worth 10 to 15 cwt. per fm.; the 80 level, in the 80 east, is worth 10 to 15 cwt. per fm.; the 90 level, in the 90 east, is worth 10 to 15 cwt. per fm.; the 100 level, in the 100 east, is worth 10 to 15 cwt. per fm.; the 110 level, in the 110 east, is worth 10 to 15 cwt. per fm.; the 120 level, in the 120 east, is worth 10 to 15 cwt. per fm.; the 130 level, in the 130 east, is worth 10 to 15 cwt. per fm.; the 140 level, in the 140 east, is worth 10 to 15 cwt. per fm.; the 150 level, in the 150 east, is worth 10 to 15 cwt. per fm.; the 160 level, in the 160 east, is worth 10 to 15 cwt. per fm.; the 170 level, in the 170 east, is worth 10 to 15 cwt. per fm.; the 180 level, in the 180 east, is worth 10 to 15 cwt. per fm.; the 190 level, in the 190 east, is worth 10 to 15 cwt. per fm.; the 200 level, in the 200 east, is worth 10 to 15 cwt. per fm.; the 210 level, in the 210 east, is worth 10 to 15 cwt. per fm.; the 220 level, in the 220 east, is worth 10 to 15 cwt. per fm.; the 230 level, in the 230 east, is worth 10 to 15 cwt. per fm.; the 240 level, in the 240 east, is worth 10 to 15 cwt. per fm.; the 250 level, in the 250 east, is worth 10 to 15 cwt. per fm.; the 260 level, in the 260 east, is worth 10 to 15 cwt. per fm.; the 270 level, in the 270 east, is worth 10 to 15 cwt. per fm.; the 280 level, in the 280 east, is worth 10 to 15 cwt. per fm.; the 290 level, in the 290 east, is worth 10 to 15 cwt. per fm.; the 300 level, in the 300 east, is worth 10 to 15 cwt. per fm.; the 310 level, in the 310 east, is worth 10 to 15 cwt. per fm.; the 320 level, in the 320 east, is worth 10 to 15 cwt. per fm.; the 330 level, in the 330 east, is worth 10 to 15 cwt. per fm.; the 340 level, in the 340 east, is worth 10 to 15 cwt. per fm.; the 350 level, in the 350 east, is worth 10 to 15 cwt. per fm.; the 360 level, in the 360 east, is worth 10 to 15 cwt. per fm.; the 370 level, in the 370 east, is worth 10 to 15 cwt. per fm.; the 380 level, in the 380 east, is worth 10 to 15 cwt. per fm.; the 390 level, in the 390 east, is worth 10 to 15 cwt. per fm.; the 400 level, in the 400 east, is worth 10 to 15 cwt. per fm.; the 410 level, in the 410 east, is worth 10 to 15 cwt. per fm.; the 420 level, in the 420 east, is worth 10 to 15 cwt. per fm.; the 430 level, in the 430 east, is worth 10 to 15 cwt. per fm.; the 440 level, in the 440 east, is worth 10 to 15 cwt. per fm.; the 450 level, in the 450 east, is worth 10 to 15 cwt. per fm.; the 460 level, in the 460 east, is worth 10 to 15 cwt. per fm.; the 470 level, in the 470 east, is worth 10 to 15 cwt. per fm.; the 480 level, in the 480 east, is worth 10 to 15 cwt. per fm.; the 490 level, in the 490 east, is worth 10 to 15 cwt. per fm.; the 500 level, in the 500 east, is worth 10 to 15 cwt. per fm.; the 510 level, in the 510 east, is worth 10 to 15 cwt. per fm.; the 520 level, in the 520 east, is worth 10 to 15 cwt. per fm.; the 530 level, in the 530 east, is worth 10 to 15 cwt. per fm.; the 540 level, in the 540 east, is worth 10 to 15 cwt. per fm.; the 550 level, in the 550 east, is worth 10 to 15 cwt. per fm.; the 560 level, in the 560 east, is worth 10 to 15 cwt. per fm.; the 570 level, in the 570 east, is worth 10 to 15 cwt. per fm.; the 580 level, in the 580 east, is worth 10 to 15 cwt. per fm.; the 590 level, in the 590 east, is worth 10 to 15 cwt. per fm.; the 600 level, in the 600 east, is worth 10 to 15 cwt. per fm.; the 610 level, in the 610 east, is worth 10 to 15 cwt. per fm.; the 620 level, in the 620 east, is worth 10 to 15 cwt. per fm.; the 630 level, in the 630 east, is worth 10 to 15 cwt. per fm.; the 640 level, in the 640 east, is worth 10 to 15 cwt. per fm.; the 650 level, in the 650 east, is worth 10 to 15 cwt. per fm.; the 660 level, in the 660 east, is worth 10 to

at 41. 10s. per fathom. Two men are engaged cutting plat, preparatory to sinking below the 20 ft. level, and when done, we shall at once commence sinking the shaft with all speed, where we have a very promising lode.

NEW WHEAL MARTHIA.—G. Richards, Feb. 18: The lode in the 74 east is composed of fluor-spar, prisms, and mounds, with occasional good stones of copper ore. There is a large stream of water issuing from this end, which shows the lode to be of a porous nature. The ground by the side of the lode, in the same level, remains good for driving, we intend to cross-cut the lode south the early part of another month, to ascertain its size and value. The lode in the bottom of the 52, east of No. 1 winze, are looking much better, producing full 10 tons of copper ore per fm. The lode in the back of the same level are yielding 4 tons of copper ore per fm. The lode in the 40, which is producing full 6 tons of copper ore per fm.

NEW WHEAL ROSE.—J. Middleton, Feb. 17: We have succeeded in clearing the adit level to Burrow's shaft, and have set it to be cleared to the adit level (16 fms. deep) for 6 ft., as per bargain, and now down, about 4 fathoms; in clearing it we find small prills of lead. We hope in the course of two weeks more to complete the shaft to the adit level, when we shall be able to go fast to the end. From what we have seen our prospects are very good indeed.

NORTH BASSET.—T. Glanville, G. Davey, Feb. 17: In the 142, east of the flat-roof shaft, the lode is 18 in. wide, chiefly composed of spar. In the winze under the 142 the lode is 2 1/2 ft. wide, composed of spar, peach, and tin, worth 121. per fm. In the 112, west of Grace's shaft, the lode is 2 ft. wide, worth 81. per fm. In the 102, west of Grace's shaft, the lode is 3 ft. wide, worth 71. per fm. In the 102, west of the cross-cut, the lode is yielding stones of tin.

NORTH BULLER.—R. Pryor, H. Harvey, Feb. 18: We are now up under ground, and am glad to say the lode in the 78, east of engine-shaft, has very much improved, it now being 2 ft. wide, worth fully 81. per fm. for copper ore; and, if it make up all over the end as good as it is for 3 ft. in height, it will then be worth 201. per fm.; it is a hollow, vuggy lode in the bottom of the level, and, judging from the ore that we have broken to-day, we should think that we are near a good bunch, as we never saw anything like it before. There is not the least symptom of the lode, being driven by the 100, which is behind this end 15 fms.; this we consider to be a good indication.

NORTH BULLER.—R. Pryor, H. Harvey, Feb. 16: The 100 is being driven east of engine-shaft a little over 12 fms., at which point the men are cutting through the lode, and have already cut into it 3 ft., which is composed of mounds, peach, and spar, with stones of copper ore. No north wall has yet been seen. The lode is letting out a quantity of water, that being the reason of us driving by the side of it, as we can make greater progress by so doing—driving by six men, at 91. 10s. per fm. The 100 cross-cut is being driven north of shaft about 13 fms.; this end is principally composed of spar, with spots of copper ore, and letting out an immense quantity of water, which has impeded the driving very much, and is now being pushed on by six men, at 161. per fm. The 78 is being driven east of shaft 27 fms., and has passed through some small rich deposits of yellow copper ore; the lode in the end, which is driving by four men, is 2 feet wide, composed of mounds, peach, spar, and blende, with good stones of ore; driving at 71. 10s. per fathom.—King's North Lode: The 80 is being driven west of cross-cut 3 1/2 fms.; the lode in the present end is 18 in. wide, producing good stones of ore; driving by four men, at 71. 10s. per fm.; this end is east of King's shaft about 45 fms., in which, about the adit level, there is a good looking lode, and some rich copper ore has been raised. In conclusion, we beg to say the lode in the 100 is large, and of a most promising character, and the cross-cut south of this level is in a beautiful mineralised channel of ground. In consequence of the immense quantity of water that is coming out of these two points we have not made the progress that might be expected. The 78, being 15 fms. in advance of the 100, and having passed through some small deposits of ore, as well as being driven dry by the same, we think it quite advisable to sink a winze below this level, near the present end. The 80, on King's north lode, we regard also as an important feature, as there has been scarcely any trial made on this lode below the adit level, and about which point there has been some rich deposits of copper ore met with. We consider, on the whole, our chances to be good, and think that with a little more perseverance we shall make some important discoveries, that will reward the adventurers for their outlay.

NORTH CROFTY.—J. Vivian, Feb. 13: In the 188, east and west of engine-shaft, the lode is large and kindly. In the 170 west the lode has greatly improved in appearance, producing tin, copper, peach, and mounds. In the 170 east the lode is 4 ft. wide, worth 401. per fm. In the winze under the 160 east the lode is 5 ft. wide, worth 401. per fm. In the 160 east the lode is 5 ft. wide, worth 401. per fm. In the winze under the 150 east the lode is worth 141. per fm.; an improvement is expected. In the 150, west of Peterick's shaft, the lode is 10 in. wide, worth 141. per fm. The lode above are worth 221. per fathom for tin and copper ore. In the 150, 130, and 120, east of Rule's shaft, the lode is composed of spar and peach, occasionally producing stones of tin and copper ore. We sold on Wednesday last 8 tons 7 cwt. of tin, at 731. 10s. per ton, and should have sold 10 tons but for an accident in the burning-house.

NORTH DOWNS.—(Special Report).—W. Pascoe, Feb. 5: I have this day inspected the above mine, and beg to hand you the following report:—King's engine-shaft is sunk 10 1/2 fms. below the 72, which is in the country, to the south of the lode, below that level. About 10 fms. below the 72 there have just intersected a cross-course in the eastern end of the shaft, to the east of which there is a patch, or floor, of rich yellow copper ore; nothing has been done to prove whether it will form the lode to the east of the cross-course, or only a deposit against it; I am inclined to think it is only a bunch. The men are now driving a cross-cut north to intersect the lode west of the cross-course, which will be 8 or 9 fms. to drive, at which point the lode will be about 10 fms. below they drive on the lode, which will take three months from this time. The 72 is driven 27 fms. east of King's shaft; the lode is principally coarse quartz, of no value for the whole distance, and the end suspended. The 72 is driven 5 fms. west of King's; the lode is much of the same character as in the eastern end, also of no value, and the end suspended. The 60 is driven 10 fms. east of Bennett's shaft; the lode is 15 inches wide, unproductive. A winze is sunk 9 fms. below the 60, and about 3 fms. in advance of the 60 end, in which the lode for the first 4 or 5 fms. is good tribute ground, but the last 3 fms. unproductive. The 50 and 40 are driven near the eastern boundary, the lode in each is poor, and both suspended; there is still some ore ground standing over these levels, which is let in four tribute pitches, at 10s. in 14. West of King's shaft the ends on the lode are all suspended at the 60, near the end; they are driving a cross-cut to intersect the south part of the lode, which will be accomplished in a short time. At Bennett's shaft the 30 cross-cut is driven 134 fms. north, which has intersected three lodes in the last 24 fms. No. 1 is opened on 5 fathoms west of the cross-cut, it is small and poor, and the end suspended. No. 2 is opened on 13 fms. west of the cross-cut, also of no value, and the end suspended. No. 3 is opened on 3 fms. west of the cross-cut; the lode is 1 1/2 ft. wide, producing occasional stones of yellow copper ore, but not enough to value. The ends throughout the mine are unproductive, and the tribute ground fast working out; unless a discovery be made soon there the returns must seriously fall off. The returns for the next three or four months will be about 3601. or 3701. per month, and the monthly cost about 6001.—P.S. There is a favourable change in the character of the country at King's shaft, being now a light soft killas, or clay-slate.

NORTH LAXBY.—J. Horner, Feb. 18: The lode is looking very much like a change. The rock is getting a little softer, and a little open joints in the lead pitches; they are beginning to look more kindly. We have nothing new in the lead pitches; they are looking about the same, with lead in and out. We have got the pillars built, and are now getting in the rods underground and on the surface. I think they will be all in this week ready for breaking the lift, and getting it into the eastern, &c.

NORTH MINERA.—J. Dunkin, Feb. 17: Saturday last being our pay and settling-day, everything passed off very satisfactorily. The eastern shaft is now down 9 fms. 3 ft. 6 in. under the 28, having 1 ft. 6 in. more to sink to complete their contract, which will be accomplished this week; the shaft is now down in time, and a very congenial rock for producing lead ore; we have also cut a branch in the bottom of the said shaft, running at right angles with the main lode, about 6 in. wide, composed of carbonate of lime and spar, and no doubt will assist us very much in sinking. The 25 fm. level to drive west of cross-cut, north of said shaft, to four men, at 71. 10s. per fm.; the lode in this is still disordered by the shale; the ground under the shale is of a most beautiful character for producing lead ore; I have no doubt of an improvement in this end shortly. The 15 to 20 ft. level, by six men, at 41. per fm.; in this shape the lode will produce 1 1/2 ton of lead ore per fathom, and looking well for further improvement. I consider the prospects of the mine to be much more cheering now than for some time.

NORTH POOL.—J. S. Phillips, J. Pope, Feb. 13: The engine-shaftmen are cross-cutting north at the depth of the future adit level of 23 fms., to intersect the lode seen at about 10 fms. deep at this shaft; it will be attained in about 6 fms. from the present end, and judging from the extraordinary appearances above, we anticipate most satisfactory results here. The adit is being continued westward from Ballarat towards the engine-shaft in a very strong lode, at 51. 10s. per fm., which has been cut through changes of underlie, size, bearing, structure, and mineralisation from its commencement to the present end, and is now entering into strongly gossanised friable quartz, peculiarly indicative of copper ores beneath. The buildings for the new 60-in. pumping-engine are being executed at the lowest tendered price of 2s. 4d. per perch of 36 cubic feet, and all necessary hands are employed facilitating the work, by raising stone and clay and attending on the carriers of stone from the old engine-house. The tradesmen are engaged preparing the various works required for the house and rods, with communications to and from the shafts for supplying.

NORTH ROSEWARNE.—J. S. Phillips, J. Tyacke, Feb. 15: The deep adit is being driven towards the new engine-shaft, by nine men, at full speed, so as to form a drainage level on the Jennings's lode and great western cross-course, for surface and engine water. This adit level is being driven by six men, on the No. 3 lode, which runs some 30 fms. south of the former lode, and is now approaching the influence of the cross-course, and improving in its appearance as it is extended nearer thereto. We consider the exposure of the lode on both sides of the cross-course most important, even at this level; as it has maintained an excellent character and strength for the past 60 fms. for mineral in depth, and it is more than probable that this confluence of magnetic influence may have deposited a chimney of copper ores on either side of this cross-course. The eastern horse-whim commands the two shafts most effectively for drawing the stuff from these drivings.

NORTH SHEPHERDS.—T. Richards, Feb. 18: At the engine-shaft sinking below the adit we are making very good progress. The clay-slate being sunk through is very congenial for silver-bearing ore, and when we cut through the lode in the 40, we shall discover mineral. The adit end is driving towards the intersection of the lode, and it is a point of much interest, so far as seeing the lodes at that depth, because the surface water will be drained, which will enable us to sink upon them. All the work is progressing in a favourable manner. There seems to be mines all around us, and it looks like the beginning of a successful future, if ample pumping-power continue to be erected, like is being done at present.

NORTH WHEAL ROBERT.—J. Richards, Jan. 18: Muchness's Shaft: In the 42 west, east of Hill's shaft, on No. 1 lode, the lode is 18 in. wide, composed of spar, peach, and mounds. In Bennett's shaft, in the back of the 42, west of Hill's shaft, on No. 1 south lode, the lode is worth 1 ton of ore per fm. In the 30, east of Hill's shaft, on No. 1 south lode, it is 15 in. wide, and yields good stones of ore. In the 30, east of Edward's cross-cut, on No. 2 south lode, the lode is at present disordered by a cross-cut, and is without ore. In Stancombe's cross-cut north, at the 30 west, the ground continues favourable for progress. In Elliott's cross-cut south, at the 62 west, the ground is hard, and progress slow.—Trial Shaft: In the 52 west the lode is small (1 ft. wide), composed of capels, peach, quartz, and a little tin ore. In the 42, east of Rowe's cross-cut, the lode is also small (9 in. wide); it yields, however, some saving work of tin ore. The lode in the stopes in the back of the 42 is yielding good tin ore.

OATFIELD.—John Vivian: At Henry Vivian's engine-shaft we have 14 men employed in making the necessary excavations for the 90-in. cylinder-engine and boiler-houses, and in doing so we have found some very rich stones of grey carbonate and yellow sulphuret of copper, clearly indicating the great value of the ores in the last working. This shaft will be no longer up for a long time, and soon as a sufficient quantity of stone can be brought upon the mine we shall commence building.

OKEL TOR.—W. Metherell, February 18: We have no material alteration in any part of the mine since last report, with the exception of the lode in the end of the 60 east, which last week was yielding 4 tons of ore per fm., but has since improved, and is now yielding 5 tons of ore per fm., and has every appearance of still further improving.

OLD HALLENBEAGLE.—J. Edwards, E. Richards, Feb. 13: We have cleared the eastern shaft to the lode 2 fms. below the 30, and hope to reach the bottom in the coming week. We have thenered up one of the shafts to the lode to fix another footway at the western part, on Wheel Road lode. The water is slowly rising.

PANT-Y-PYDEW.—C. Hector, Feb. 18: Pulley Shaft: We have driven a cross-cut

from the 50 a distance of 9 yards, and have cut into an old shaft, which run in 1850, and have cleared it to the 64, where we came on their level at the bottom of the shaft, and found about 1 1/2 ton of ore left by them in the level. We have cleared the level, which was driven about 7 yards, and found a good course of ore going down. We shall sink the shaft, and drive a level to intersect the lode going down; it is on the Galabell.—Robert's Shaft: This shaft is sunk to the 46, and the lode nearly 2 feet wide, but right up into the white limestone, and expect in a few more yards to find ore in the lode; this is the Pettist Bank lode, and wherever it has been worked has proved rich.—Engine-shaft: We commence on this shaft to-morrow. The engine has been thoroughly repaired, and a heavy fly-wheel has been attached, and we trust soon to be on the lode of ore we left at the time the heavy rain came on last autumn.

PEDNAN-DREA UNITED.—Wm. Treagay, J. Thomas, Feb. 12: Sump: In the 130 east the lode is large, and letting out much water. In the 120 east end the lode is worth 81. per fathom. In the 120 east winze the lode is worth 451. per fm. In the 120 west end the lode is worth 71. per fathom. In the 110 west end the lode is worth 91. per fathom. The 100 east end is poor. The 100 west end is poor. The 90 west, on Martin's lode, is worth 71. per fm. The 90 west rise, on Martin's lode, is worth 71. per fm. The 90 west, on engine lode, is poor. The lode in the bottom of Cobler's shaft is worth 101. per fm. The rise in the 100, east of this shaft, is worth 61. per fm. In the 90 east end the lode is worth 71. per fathom. In the 68 east end the lode is worth 31. per fm. In the 68 west end the lode is worth 41. per fm. We sold to-day at Carvedras 5 tons 17 cwt. 0 gr. 6 lbs. of black tin, for 5961. 15s. 6d.

PENIDRE CONSOLES.—(Special Report).—W. Pascoe, Feb. 9: The engine-shaft is sunk 24 fms. below the 141, in which the lode is said to be 2 feet wide, producing stones of tin ore, but not to value. The 142 is driven 56 fathoms north of engine-shaft; the lode (by Capt. Warren's account) is unproductive for the first 42 fathoms; in the last 10 or 12 fathoms the lode is 2 feet wide, and worth 41. per fathom for tin. The 142 is driven 41 fathoms south of the shaft; the lode is small and unproductive for the whole distance. In consequence of an increase of water this part of the mine cannot be seen. The 130 is driven 59 fathoms north of engine-shaft, the first 40 fathoms of which are unproductive; the last 15 or 16 fms. the lode is large in places, producing low quality tinstuff and occasional stones of copper ore, but of little value for the latter, this level appears to unbottom the copper about 7 fathoms behind the end, and about 5 fathoms above the level; the lode produced pretty much copper ore for 8 or 9 fms. in length, but at present is only worth 41. per fathom. The 130 is driven 64 fms. south of engine-shaft; the first 40 fathoms are of no value; the next 14 fms. are through tin ground, varying from 81. to 121. per fathom, which is stopping by six men, and worth 101. per fathom on an average. In the last 10 fms. the lode is 2 1/2 feet wide, and worth 41. per fathom. The 118 is driven 102 fms. north of shaft; this level opened up some good deposits of copper ore, and of a kindly character. About 6 fathoms behind the end two men are stopping the back for 6 fathoms in length; the lode is 2 1/2 feet wide, and worth 41. per fathom for copper ore. The 118 is driven 79 fms. south of engine-shaft, the first 37 fathoms of which are unproductive; beyond this point to within 2 fathoms of the end the lode is from 2 to 4 feet wide, and worth from 41. to 81. per fm. In the end it is split into three parts, all of which are yielding a little tin, but not of much value; this end is 15 fathoms in advance of the 130. The 106 is driven 116 fathoms north of shaft; the lode is 2 feet wide, principally iron and flookan, with a little tin, but not of much value. The end is suspended, fearing an increase of water. The 82 is driven 57 fathoms south of shaft, also in a large lode, but of no value. The 70 is driven 40 fathoms south of shaft; the lode is small and unproductive. The adit level is driven 110 fathoms south of shaft, in which the lode is split into branches for a great distance, and of no value throughout. In reviewing the mine, the lode is of a very fair width, and will yield a large quantity of low quality tinstuff; the ground is also easy, and can be wrought cheap. The stratum, north of engine-shaft, is clay-slate, in which the lode has made large deposits of copper ore at intervals, but not of much value. The end is suspended, fearing an increase of water. The 82 is driven 57 fathoms south of shaft, also in a large lode, but of no value. The 70 is driven 40 fathoms south of shaft; the lode is small and unproductive. The adit level is driven 110 fathoms south of shaft, in which the lode is split into branches for a great distance, and of no value throughout. In reviewing the mine, the lode is of a very fair width, and will yield a large quantity of low quality tinstuff; the ground is also easy, and can be wrought cheap. 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per fathom. The lode in the slope below the 100, west from winze, is worth for tin 20l. per fathom. The lode in the slope east from same is worth 20l. per fm. At Alexander's lode, in the 24, we have met a cross-cut, which I think has cut the lode in the north, and we are now driving a cross-cut in that direction. The lode in the winze below the 12 is worth for copper 8l. per fm. The slope above the 12 is worth 6l. per fathom. The winze below the adit level is unproductive. The lode in the adit east is poor. The adit north cross-cut is driven to the boundary and suspended. The ground in the adit south cross-cut is favourable for driving.

WHEAL HARTLEY.—P. Skewes, Feb. 16: The engine-shaft is sunk 5 fathoms 3 ft. under the deep adit, the lode in which is 3½ ft. wide, with a very kindly appearance, composed of quartz, with a little mica, which the lode is 10 ft. wide, and the lode with the shoots of ore in the adit, west of engine-shaft, and for the last 3 fms. the lode is taken down perpendicular. The deep adit is driven east of engine-shaft 27 fathoms; the lode in the end is 1¼ ft. wide, composed of gossan and peach, and producing good stones of yellow copper ore. The cross-cut is driven north from engine-shaft 3 fathoms, and as this will intersect the Wheal Fawcett lode immediately under the run of tin ground driven through at the shallow adit, we think it most advisable to force on this as fast as possible to intersect the lode, which will take us a month, after which we shall open our cross-cut, which is 80 fathoms west of the engine-shaft, and contains a small quantity of silver.

WHEAL HEARLE.—J. S. Phillips, Feb. 15: The skip-shaft, being cleared of water and stuff from its depth of 130 fms., and the east and west levels extended therefrom to open out the continuation of tin ground from the upper levels. The excavation for fork pulk, at the bottom of the engine-shaft, will be completed this week, and the 122 commenced for exploration in the deep and important wing of untried ground. The 122, south and west, are without alteration; the latter continues through tribute ground, as usual, to the surface again, the lode in the 122, in the run of tin, now being entered by the 100, at 50s. and worth 8l. per fm.; and, although the few fathoms of intervening lode may be comparatively poor, it will improve again on attaining the line of its mineral dip. The general reserve slopes of the mine could be wrought at an average tribute of 12s. in 1l., some of which will be worked on outcrop, as it must all pass through the stamps without much assortment. The next monthly sale of tin will realise upwards of 2500l. and if the 130 a venture satisfactorily it will be further increased. As the levels and slopes thus far produce remunerative quantities of tin, I have little doubt that the deeper levels, by yielding more tin, will ultimately give profits to the shareholders.

WHEAL HOPE.—W. H. Reynolds, Feb. 15: The shaft is set to eight miners and four labourers to be sunk below the 75, at 30s. per fm., for the length of the shaft (10 ft.); the lode is worth 12l. per fm. The 75 west is set to six men, at 8l. per fm.; the lode ready, and likely to improve. A rise in the back of the 75 is set to six men, at 8l. per fm.; the lode is worth 9l. per fm. The 65 west is set to six men, at 7l. 10s. per fm.; the lode at last taking down was of much the same value as for some time past. The 65 west, under the other part of the lode, is set to six men, at 5l. per fm.; we have cut a cross-cut, and find a large area, with a quantity of water issuing from it. The 25 west, on the middle lode, is set to six men, to intersect the engine lode west of the south lode, and expect we have about 7 or 8 fms. to reach it. The adit end west, on engine lode, west of the south lode, yields lead work, and looks very likely to improve. We have set 12 pitches, at 9l. to 10l. per ton for the crop lead; the seconds will be about sufficient to pay the cost of drawing and dressing the ores.

WHEAL IDA.—F. C. Harpur, Feb. 16: Our principal operations here are progressing pretty favourably; the ground in the engine-shaft, which is now about 14 fms. deep, contains a fine material for slings, consisting of quartz, mica, and some conglomerate character, traversed by small branches, composed of quartz, peach, mundle, and spots of lead. The water, as we go down, is slightly on the increase.

WHEAL KITTY (St. Agnes).—S. Davey, W. Polkinghorne, Feb. 13: For the pit week we have been desling the lode in the 100, east of engine-shaft, but shall take it up against our next setting, when we will give the particulars respecting it. The lode in the 72, east of ditto, and west of cross-cut, has greatly improved during the last few days, and is now worth 14l. per fm.—Hoigate's Shaft, Fryor's Lode: The lode in the 75, west of ditto, is set to six men, at 8l. per fm.; the lode is very good, and the 75, in ditto, west of cross-cut, the lode is showing a good appearance, and worth 12l. per fathom. The lode in the 54, east of cross-cut, is worth 10l. per fm.; in the new shaft, sinking below ditto, 12l. per fm.; and in this level, west of ditto, 14l. per fm. In the 44, east of cross-cut, we have again met with a small cross-course, that has for the time lessened the value of the lode, now worth 13l. per fm.; in this level, west of ditto, the lode is worth 20l. per fm. The lode in the 34, east of cross-cut, is still worth 7l. per fathom; and in the new shaft, in back of ditto, 10l. per fm.; this level, west of cross-cut, is worth 10l. per fm. The 24, east of cross-cut, is set to six men, at 8l. per fm.; the lode is worth 2l. per fathom, and in penetrating through it we find it to be 2 ft. wide, and worth 14l. per fm. There is no change in either of the cross-cuts or new shaft sinking below the adit since our last. The slopes and pitches are without any change.

WHEAL MARGERY.—R. James, W. Rogers, Feb. 17: At the engine-shaft sinking below the 100 the lode is 3 ft. wide, but not yielding enough ore to value. At the American shaft, sinking below the 122, the lode is 18 in. wide, and yielding stones of copper ore, but not sufficient to value. In the 122 east the lode is worth 3l. per fm. In the 122 west, the lode is worth 10l. per fm. In the 110 east, the lode is worth 10l. per fm. In back of the 122 east is holed to the bottom of the 110, and we shall now stop the ends of it contribute. In the 110 east the lode is producing a small quantity of copper ore, but not to value. In the 110 west the lode is worth 3l. per fm. In the 110 east the lode is producing stones of copper ore, but not enough to value. In the 100 west the lode is worth 2l. per fm. We cannot report any change in the tribute during the last week. We expect to sample on Tuesday next 260 or 270 tons of copper ore.

WHEAL MARY ANN.—P. Clymo, H. Hodge, J. Harris, J. Stevens, Feb. 18: City-shaft sunk 5½ fms. under the 130. The cross-cut at this level is extended east 3½ fms. towards the lode. In the 180 north the lode is 2½ ft. wide, worth 7l. per fm.; in the same level south it is 3 ft. wide, worth 9l. per fm. In the 170 south it is 2 ft. wide, worth 8l. per fm.; in the same level, north of Pollard's shaft, it is 2½ ft. wide, worth 5l. per fm. The slopes and pitches are producing much as usual.

WHEAL NORRIS.—W. Bugehlo, Feb. 13: At our monthly setting to-day the following bargains were let:—The 52 cross-cut to drive south of Cremorne engine-shaft, let to six men, 2 fms., at 7l. per fathom. Carter's shaft to sink below the 35 fm. level, set to six men, 1 fm., at 8l. per fathom. The cross-cut at this level is extended east 3½ fms. towards the lode. In the 180 north the lode is 2½ ft. wide, worth 7l. per fm.; in the same level south it is 3 ft. wide, worth 9l. per fm. In the 170 south it is 2 ft. wide, worth 8l. per fm.; in the same level, north of Pollard's shaft, it is 2½ ft. wide, worth 5l. per fm. The slopes and pitches are producing much as usual.

WHEAL POLLARD.—W. C. Cock, Feb. 13: The lode in the engine-shaft appears to be leaving its perpendicular direction, and assuming more its former course, which will be to our advantage in sinking; it is about 1 ft. wide. The ground has not been quite so favourable for sinking during the last fortnight.

WHEAL SPARSON.—W. Tregay, E. Chervin, Feb. 12: The shaftmen will complete the cutting down of the engine-shaft as far as the adit level early in the coming week. The other men have been employed securing the levels that will be required for our work, and securing the shaft. The mascons are making good progress in building up the bottom of the engine-house. All the other surface work is being got forward as fast as possible.

WHEAL THREWE.—J. Middleton, Feb. 17: We have cross-cut 15 feet west from Siceeman's shaft, but have not yet discovered the western part of the lode. The ground has changed, and become more solid, and driving; the slope is 3 fms. more to cut. **WHEAL TREW.**—W. S. Williams, Feb. 17: The engine-shaft is sinking below the 143, the lode is 8 in. wide, yielding low-price tinstuff, with favourable appearance for improvement. In the same level west the lode is 6 in. wide, worth 7l. per fathom. In the same level east the lode is 5 in. wide, yielding low-price tinstuff. In the 133, east of the same, Allen's branch is unproductive. In the cross-cut north of the same level there is no change to notice. In the winze sinking under the same level, east of shaft, Allen's branch is yielding low-price tinstuff. The winze, in the 133, east of the same, Allen's branch, are worth on an average 12l. per fathom. In the 103, east of the same shaft, we are still cross-cutting south to prove if there is more branch in that direction. The winze sinking under the same level we expect to communicate this week; the branch in the bottom of the same is poor. The slopes in the back and bottom of the same level, on Allen's branch, are worth on an average 12l. per fathom.

WHEAL UNION.—T. Glanville: Tail-rope setting for February A. plan, to cut the bottom of the flat-rod shaft; to make 9 ft. wide, 10 ft. long, and 8l. high, ground to be taken down in south side of shaft, and put in skip-rod, per bargain, by twelve men—taken at 35l. The 40 fm. level to drive east of the old engine-shaft, by four men, 2 fms. for the month—taken at 6l. per fm. The 30 fm. level cross-cut to drive south of the tin lode, by two men, for the month—taken at 24l. per fathom. The 60 fm. level cross-cut to drive north of East Can Brea, by four men, for the month—taken at 8l. per fathom. The 60 ft. level cross-cut to drive south of the tin lode, by two men, for the month—taken at 6l. per fathom. The 76 fm. level to drive east of the flat-rod shaft, by six men, for the month—taken at 11l. per fathom.

WHEAL UNITY.—W. H. Reynolds, Feb. 16: In the 40, west of the western shaft, we have driven 3 fms. by the side of the lode, where we have cut into it and broken excellent stones of copper ore; we expect to see this lode 6 ft. further west by Thursday, where we hope to see a further improvement. The lode in the 50 west contains good black copper ore, and is a fine material for slings, below the 60 it is of the most promising character, and is a fine material for slings.

WHEAL UNY.—S. Coode, M. Rogers, Feb. 13: Tin lode: We have resumed working at the 110 and 100 again since Tuesday last. The winze sinking below the 100, west of engine-shaft, we expect to hole next week, when we shall drive the 110 west with all possible dispatch. The lode intersected in the cross-cut north at the 100, east of engine-shaft, is worth 20l. per fathom for tin.—Copper Lode: The lode in the 65, west of No. 3 shaft, is worth 12l. per fm. for copper ore. The lode in the 65 east is of a promising character, and is a fine material for slings, and is not to value. The lode in the 65 west is split, but of a kindly character to improve soon. The lode in the new engine-shaft is of a promising character, producing good stones of ore.

WHEAL VLOW.—J. Tonkin, Wm. Johns, Feb. 18: In the engine-shaft below adit, now down 7 fms., the lode is 4 ft. wide, worth 12l. per fm.; we expect to sink this lode to the 10 in six weeks from this time. In the deep adit east, on the north part of the tin lode, the lode is 2 ft. wide, producing a little tin. In the slopes, east of the engine-shaft, over the deep adit, the lode is 4 ft. wide, worth 10l. per fm. In the slopes over the deep adit, the lode is 4 ft. wide, worth 10l. per fm. In the slopes over the deep adit, the lode is 4 ft. wide, worth 10l. per fm. In the slopes over the deep adit, the lode is 4 ft. wide, worth 10l. per fm. We expect about the middle of next week to set 2000l. worth of tin.

WHEAL VVYAN.—W. Tregue, Feb. 16: The 65 end, driving south-west of engine shaft (towards Rose's shaft), is progressing favourably. The 40 end, driving west of engine-shaft, is at present poor for mineral. The slope in back of this level is producing tin stamping-work, grey and yellow ores, of a rich quality, and will, I have no doubt, prove to be a valuable piece of ground. The ground in the 40 cross-cut north

good stopes in the bottom of the 30, east of new shaft; the lode in it is 4 ft. wide, well defined; worth at the present point over 3 tons per fathom; but we find it rather sparse for stoping, owing to the large stream of water coming from the end. The lode in the stopes at the back of the 20 is from 3 to 4 ft. wide, composed chiefly of ore and mudstone; worth of the former about 2 tons per fathom. On the whole, our prospects are better than they were a month ago. Our machinery is working well.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

GOLD IN WALES.—I perceive that the Vigra and Clogau Gold Mining Company are this week again able to report a considerable increase in the yield of gold. As a shareholder in some of the younger gold companies, I can only say that the continued returns made by this company form an all-sufficient reply to those parties who have so systematically depreciated them by the cry of "no gold in Wales." The sets of the East Clogau, the West Clogau, the St. David's, and the Welsh Gold Mining Companies, all of which are in the same neighbourhood, run parallel. I can hardly be brought to believe that the Vigra Company has all the gold which Nature has deposited in the district. I have no doubt there is as much for us as for them, and that when we shall have worked as long and gone as deep as they have our perseverance will meet with the same remark. My object in writing is to urge the directors of the various companies to lose no time in the erection of machinery and proper appliances for the vigorous prosecution of the works. (Since writing the above, I am happy to find that the Welsh Gold Mining Company have already erected machinery, and are extracting gold; that the St. David's are erecting machinery, and that the East Clogau are putting up a water-wheel to work Britten's pans, and are about to sink upon the point where gold has been discovered.)

THE GRILLS MINES.—A correspondent writes from this locality, giving a list of mines worked within a radius of three to four miles, whose returns of ore have amounted to near 4,000,000 sterling. Such a shallow district must, at least, be admitted to be very productive, but one of these has attained a depth of 140 fathoms.

WHEAL CREBOR.—A very fine stone of ore from the 84 fathom level, east of Cock's shaft, showing the nature and quality of the lode, has been received at the office, which, no doubt, will prove interesting to such of the shareholders as may avail themselves of an inspection.

CRANE.—The lode in the Brigan shaft is 4 feet wide, still improving, and presenting a promising appearance. There is no alteration in any other part of the mine since last reported. We have sampled to-day 14 tons of copper ore.

WHEAL CURTIS.—The stopes in back of the 20, east and west of shaft, are much improved. The pitch in bottom of the 10 is looking better. No alteration in any other part of the mine. Square's shaft, on the Dumphing lode, is now cut down from surface to the adit level, and is ready to fix skip-road. When this is done we shall begin to sink immediately. The shaftmen are progressing very favourably cutting elstern-plat in bottom of sump-shaft.

NORTH GREAT WORK. though but little dealt in on the London market, well deserves attention; it is to the north-west of Great Wheel Vor and Great Work Consols; to the north-east of Wheal Grylls, Mill Pool, and West Great Work; and to the south of the mines which have proved so rich in the Crowan district. The set is very extensive; in fact, almost large enough for two mines. The district is good, the lodes most promising in appearance, and intersected by cross-courses; in fact, North Great Work possesses all the essentials to form a great and lasting mine.

STRAY PARK.—The following extract will, no doubt, prove of interest to the shareholders, and will be some encouragement to those who have supported the mine so long:—"The character of the lode in the shaft sinking below the 226 has undergone a favourable change, and is producing good work for tin, and looks well for further improvement shortly." As the next level will be looked for to repay us for our anxiety and the heavy calls we have paid to prosecute this adventure, the above improvement is cheering indeed—all connected with the mine feeling now assured a few months at the farthest will see the shares higher than ever, and I consider it only just the out-advancers should be informed of the important change which has taken place.

THE GREAT DEVON AND BEDFORD (Colehanton) MINING COMPANY.—The reports issued by this company state that the main lode has been intersected in the 20 fathom level, with results yielding mangle, prinn, and peach, with yellow and black copper ore of excellent quality. Three branches have also been found in the shaft and cross-cut, underlying to join the main lode at certain depths stated; another lode has also been discovered in the shaft, at a depth of 28 fathoms 3 feet. This important information has already caused an improvement in the estimated value of the property. We are also informed that a lode, carrying a branch of rich lead ore, worth 8s. to 10s. per fathom, has been discovered in driving the main lode east. At 10 to 12 fathoms a cross-course will be intersected, where from the present appearance of the lode large deposits of ore may be expected.

WHEAL SETON has greatly improved; the sump-wine is worth 18 tons of copper ore per fathom. Tilly's shaft is worth 12 tons. The other parts of the mine are looking exceedingly well. We are daily expecting to cut the south counter in the 150.

NORTH CROFTY.—The great improvements in this mine are not, I think, known to the public. Situated close to Dolcoath and Cook's Kitchen, and having the same run of lodes, the former, there is not a mine in the list; probably, with such prospects, and the improvement being regular (lately more rapid) with the depth attained, there is an amount of certainty in the matter, looking to its rich neighbours as exceptional as is incontestable. Mr. J. Y. Watson, in his "Annual Review" of a year ago, wrote of this mine as follows:—"Since it has been under its present management its character has been changed, much in the same manner as Dolcoath and Cook's Kitchen, before it turned out very productive for tin." Since then the progress has been as marked and great as it has been regular and steady; latterly, however, evincing more rapid improvement, and the lode is now, by the worth 10s. per fathom, together, having in the lower levels nearly doubled in value in the last two months.

CLOWANCE WOOD MINING COMPANY.—The directors of this company have given notice that they will proceed to allot the shares on Monday next.

GRYLLS CONSOLS. hitherto worked by a few local adventurers, is this week introduced to the notice of the public, and, considering its position and prospects, is likely to prove one of the prizes of the year.

ST. DAVID'S (Gold).—Captain Faulk writes—"We are continually discovering traces of gold in the Elizabeth lode, which is of enormous size, and one of the largest in the district."

WEST CLIFFORD UNITED MINING COMPANY.—The list for applications for shares in this company will close on Thursday. Great success is expected to attend this undertaking, the intrinsic merits of which are considered second to none in the district, it being surrounded by the richest mines in the locality. The lodes of the Clifford Amalgamated are known to run through this set; and several of the directors are gentlemen of high standing in the county, and practically acquainted with mining, more particularly in that district.

GREAT WEST CHIVERTON.—This set, adjoining West Chiverton and Chiverton Moor, is about to be worked energetically by a London Company, who anticipate that they will make large profits from it. The number of shares is to be 3000, a favourite number in the Chiverton district. Great West Chiverton is on the same lodes and in the same strata as West Chiverton.

NORTH GREAT WORK.—As this company is now opening up so well, a London office of reference would facilitate the transaction of all business; for although the Liverpool adventurers are good holders, and work their mine energetically, still many who would be attracted by the position of the mine to invest money in shares are deterred from doing so by not being able to obtain information in London in reference to the company.

EAST CARADON.—This mine is gradually improving again, and during the next few weeks is likely to cause much excitement. The shares in the course of the week have risen 2s. each, leaving off at 30 to 30½, and, as the lode in the 80 fathom level cross-cut is likely to be cut into rich within the next ten days, no doubt shares will have a great rise, and probably see 35s. to 40s. a share. The last two months' sales of copper ore (nearly 1000 tons) realised 7400s., which will leave a profit of about 5000s. The next quarterly dividend will be 25s. a share, or equal to 17 per cent. per annum. If the lode in the 80 fms. level cross-cut is cut rich shares must go to 50s. again.

ST. DAVID'S (Gold).—Specifications and plans of machinery for this mine have been approved by the directors, and will be in working order in about seventy days. The appliances for working the river are in course of construction in London, and river-washing will be shortly resumed.

SOUTH WHEAL CROFTY. is looking remarkably well, the shafts and levels being worth 74s. per fathom. Considering that the mine is in only 937 shares, the present price of the shares is exceedingly low. The mine is worked with great energy, and the tutwork operations have been considerably increased. The returns are principally from sinking and drivages, no stopes being valued in the reports.

CRANE.—The shaft sinking on the Brigan lode has greatly improved in the last few fathoms; the lode is now fully 4 feet wide, and presenting a most promising appearance. There is no particular change in any other part of the mine. About 14 tons of ore was sampled on Thursday of the usual rich quality. The slightest improvement in the mine at the present moment would make the shares a very favourite investment.

CARNELLOR CONSOLS.—This mine, which is in the parish of Zennor, is held under lease for 21 years, at 1-20th duty. The adventure is to be conducted on the Cost-bank System, and is divided into 3000 shares, on which 1s. per share has been paid; about 600s. remains for further operations, and the monthly cost is about 120s. There are several lodes running through the set, three of which have been worked upon shallow by the old men, and tin and copper was returned, but only one, the main lode, has been seen in depth. At about 50 fms. west of the shaft these three lodes will form a junction, and it is intended to sink the shaft 20 fms. deeper, and then drive a level west to cut these lodes at the point of intersection; the adit is also to be continued to open other lodes. A 42-foot water-wheel has been purchased for winding and stamping. It is calculated that a small call, in addition to the unexpended balance, will be enough to prove the points referred to. Capt. Roach, Rogers, and Williams have inspected and reported favourably upon the property.

VALE OF TOWY.—For some time past the weekly reports received from this mine have shown a steady and material improvement. The blende is of so rich a quality that the returns of this metal alone almost pay the cost of the mine. The character of the ground in the lower level has so much improved, that the captain is very confident that a rich bunch of lead will shortly be discovered. Such a discovery would again place the mine in the Dividend List, and cause the shares rapidly to advance to a high price.

WHEAL CURTIS has improved considerably within the last few days. The stopes in the bottom of the 30 are becoming more productive. The wine sinking below the 10 has also improved, and the mine in every point is looking far better than at any previous time during the present working. It will not be at all surprising if this mine takes a very leading position within the next few months.

KONGSBERG (Native Silver).—A great discovery has been made at this mine, and it behoves the shareholders to watch well their interest.

NORTHAMPTONSHIRE IRON ORE.—Another large furnace, of considerable dimensions, has been commenced by Messrs. Butlin and Co., of Wel-lingborough.

THE DISCOVERY OF IRON ORE ON THE SANDRINGHAM ESTATE.—An able letter on this subject appears in a local paper, which will be noticed in next week's Journal. The statements which have appeared on the subject seem rather highly coloured; even, however, should they prove well founded, the absence of coal in the neighbourhood will necessitate the shipment or tram-transport of most of the ore obtained to other districts.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending February 14 was 9806s. 6s. 9d.

* With this week's Journal we give a SUPPLEMENTAL SHEET, which contains—History of Mining Operations in Teesdale; the Actual State of the Works in the Mount Cenis Tunnel, and Description of the Machinery employed; Mining in South Australia; Gold Mining in Victoria; the Marquitta Mining Company meeting; War and the Metal Trades; the Grylls Mining District, with Plan; Foreign Mining Reports, &c.

* With last week's Journal we gave a SUPPLEMENTAL SHEET, which contains a report of the Miners' Association of Devon and Cornwall general meeting; the Geological Society of London; the Cornmartin (North Devon) Mining District; Mining in Ireland—No. XIII.; the Island of Easdale—No. III.; A German Mine; Foreign Mines, &c.

* With the Journal of Feb. 6 we gave a SUPPLEMENTAL SHEET, which contains—Slate Quarrying in Easdale; Mining in Ireland—the Sheep's Head District; Institute of Mechanical Engineers; the Cornmartin, North Devon, Mining District, with Plan; Manchester Association for the Prevention of Steam-boiler Explosions; the Coal Trade of New South Wales; Free Trade in Inventions; Mining Statistics of Cornwall and Devon; Naval Construction, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 19, 1864.

COPPER. £ s. d.		BRASS. Per lb.	
Best selected.....	116 0 0	Sheets.....	11½ d.-11¾ d.
Tough cake.....	113 0 0	Wire.....	10¾ d.-10¾ d.
Tin.....	113 0 0	Tubes.....	11½ d.
Barra Barra.....	116 0 0	FOREIGN STEEL. Per Ton.	
Copper wire.....	0 1 2½	Swedish, in kegs (rolled).....	15 0 0
ditto tubes.....	0 1 2½	(hammered).....	16 0 0
Sheathing & bolts.....	120 0 0	Swedish, in faggots.....	17 0 0
Bottoms.....	125 0 0	English, Spring.....	18 0 0
Old (Exchange).....	126 0 0	Bessemer's, Engineers Tool.....	18 0 0
IRON. Per Ton.		Spindle.....	30 0 0
Bars, Welsh, in London.....	8 15 0	QUICKSILVER.....	7 0 0 p. bottle
ditto, to arrive.....	9 0 0	SPELTEN. Per Ton.	
Nail rods.....	9 10 0	Foreign.....	21 10 0
" Stafford, in London.....	11 0 0	To arrive.....	21 5 0
Bars.....	11 0 0	SINO.	
Hoops.....	12 0 0	In sheets.....	26 10 0
Sheets, single.....	13 0 0	TIN.	
Fig. No. 1, in Wales.....	4 10 0	English, blocks.....	116 0 0
Refined metal, ditto.....	4 0 0	ditto, Bars (in barrels).....	117 0 0
Bars, common, ditto.....	7 15 0	ditto, Refined.....	121 0 0
ditto, merchant, in Tees.....	9 10 0	Banca.....	118 0 0
ditto, railway, in Wales.....	7 15 0	Straits.....	117 0 0
ditto, Swed. in London.....	12 10 0	TIN-PLATE.	
Hoops.....	13 0 0	IC Charcoal, 1st qua. p. bx. 111 0 1 13 0	
Fig. No. 1, in Clyde.....	2 19 0	IC Ditto 1st qua. p. bx. 117 0 1 10 0	
ditto, f.o.b. in Tees.....	3 3 0	IC Ditto 2d qua. p. bx. 119 0 1 10 0	
ditto, f.o.b. in Tees.....	3 2 0	IC Ditto 3d qua. p. bx. 115 0 1 16 0	
Railway chairs.....	5 10 0	IC Coke.....	1 6 0 1 7 6
" spikes.....	11 0 0	IC Ditto.....	1 12 0 1 13 6
LEAD.		Canada plates.....	p. ton 14 0 0
English Pig, ordy. soft.....	21 10 0	In London; 20s. less at the works.	
ditto (WB).....	22 5 0	Yellow Metal Sheathing. p. lb. 10d.-10½ d.	
Ditto sheet.....	22 0 0	Sheets.....	p. lb. 10d.-10½ d.
Ditto rod.....	21 10 0	Indian Charcoal Pigs.....	7 0 0 7 10 0
Ditto white.....	26 0 0	In London.....	
Ditto patent shot.....	24 0 0		
Spanish.....	21 0 0		

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The Metal Market, during the past week, has not presented any particular feature of interest. Business generally has been dull and inactive, and though some transactions of a speculative character have taken place, they have been by no means very important. The still high rate of interest, with the present general aspect of political affairs, telling unfavourably upon the market, and tending to prevent many operations, which otherwise might be entered into. It was expected that the directors of the Bank of England would have announced a further reduction of the rate of discount on Thursday last, but this was not done; had it been the case it would have tended somewhat to raise the drooping energies of the metal trade, and it is to be hoped that this reduction is not far distant. The advices from India have been of a rather more favourable character; the money market there appears to be easier, and the rate of exchange somewhat lower; this is, so far, good, and it is to be hoped that the next intelligence will be still more cheering, as it is very desirable that the Indian trade should be improved, having been for some time languishing; but it may now be anticipated that affairs in India have seen the worst, and will take a more favourable turn.

COPPER.—Transactions in this metal continue very limited, and there are still some second-hand parcels on the market, which may be obtained at from 3s. to 4s. under smelters' prices. Bombay advices state that there is a rather better feeling in copper there.

IRON.—The intelligence from the iron districts state that there exists a fair amount of orders from America, and for hoops and sheets also the demand is generally good; for bars, however, the orders are not very large at the present time; no doubt large orders given out before the advance remain to be executed; but the buyers, in many cases, do not send specifications. The leading houses are busy, and the small makers tolerably so; and the almost universal opinion is that the orders to be given out by the end of the present month will be large. Swedish iron continues looking well; the stock here is comparatively small, and until arrivals can take place the present price will be maintained. Scotch pig-iron has not very greatly varied in price during the week, though the general tendency of the market has been downward, apprehensions concerning European politics having acted prejudicially upon the market. The price declined from 61s. 10d. cash, and 62s. 4½d. one month, to 60s. cash, and 61s. 6d. three months; the market, however, rallied to 60s. 3d. cash, and 61s. 9d. three months, at which a tolerable amount of business was done. The last advices from Glasgow state that a further improvement took place, and a moderate business was done at 60s. 6d. cash, 61s. one month, and 62s. three months. On the intelligence of the blockade of the German ports, however, warrants dropped to 60s. 1½d. cash, and 61s. 10½d. three months, at which the market closed sellers; buyers, 1½d. less.

LEAD.—A very fair amount of business is still doing in this metal. Prices remain firm at 21s. 10s. for common English pig, and 22s. 5s. for W.B. Tin.—But little business is doing in foreign; the market is very inactive, and no improvement in prices from last quotations.

SPELTEN.—The market continues firm, although no advance in prices has occurred; transactions have taken place at 21s. 10s. for this month's delivery, 21s. for April, and 20s. 10s. for June delivery.

STEEL.—No improvement has taken place.

TIN-PLATES.—An average amount of business doing at former prices.

QUICKSILVER.—No change has yet occurred.

THE SCOTCH PIG-IRON TRADE.—Statistics in the present age dispel illusion, and applying those to the greatest and most important industry of Scotland, let us look calmly at the result. The Iron Circulars issued at the end of last year exhibit the accuracy of the statement which appeared in the Journal two weeks ago in regard to the Scotch pig-iron trade. The fact, therefore, remains that the stock of pig-iron in Scotland is now at least 800,000 tons; and another important fact to be kept in view is that there are 134 furnaces in blast, producing about 24,000 tons weekly, whilst the total deliveries have not yet exceeded 18,500 tons weekly. It is, therefore, not to be wondered at, with the enormous accumulation of stocks, and prices at the present range, that consumers and shippers should confine their operations to the narrowest limits, and, of course, increasing depression in price must be the inevitable result.

BOSTON, FEB. 1.—There have been sales of Pictou and Sydney coal at \$8 to \$8.50 per ton, cash. In English Cannel the sales have confined to small lots at \$15 to \$17 per ton. Anthracite have been in steady retail demand at \$12 per ton.

NEW YORK, FEB. 3.—The coal market has been fairly active for domestic, and prices are without change to note, but consumers have the advantage at the close. We quote from yard at \$7 to \$9.50 per ton. The supply of foreign is very limited, the demand fair, and prices firm. In copper, refined ingot has continued in good demand at 40 to 40½c. for Baltimore and Bergen Point, and 41½ to 42c., cash, for Lake Superior. New sheathing bolts and brazier's are firm at 36c.

COAL MARKET.—On Monday, 32 fresh ships came forward, and the weather continuing very unfavourable business was dull, at Friday's quotations for all descriptions. Best house coal, 19s. to 20s.; seconds, 17s. to 18s.; Hartley's, 13s. 6d. to 14s. 6d.; manufacturers', 13s. to 15s. per ton.—On Wednesday there were 22 arrivals, which, added to those standing over from Monday, gave a considerable quantity of house coal for sale, and prices were reduced 1s. per ton; this stimulated demand, and a fair amount of business was done. In other coals no alteration in value.

On Friday, the northerly wind brought up 118 fresh ships, and the weather being cold and frosty there was a steady business in house coal, at fully last prices; Hartley's and manufacturers' without alteration. Hetton Wallsend 19s.; Braddell's Wallsend, 17s. 6d.; East Hartlepool Wallsend, 18s. 6d.; South Kelloe Wallsend, 17s. 3d.; Hough Hall Wallsend, 17s. 3d.; Hetton Lyons Wallsend, 16s.; Framwellgate Wallsend, 16s.; Hartley's Hartley, 14s. 6d.; Tanfield Moor, 15s.; 60 cargoes unsold; 20 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Laird, Liverpool, we learn that the quantities of coal exported during Jan. was 531,704 tons, against 394,381 tons in the corresponding month of 1863, showing an increase of 137,323 tons. The particulars are—From the Northern ports, 207,542 tons; Yorkshire, 16,317 tons; Liverpool, 66,202 tons; Severn ports, 205,672 tons; and Scotch, 35,971 tons. The increase was—Northern ports, 62,269 tons; Liverpool, 26,218 tons; Severn ports, 47,991 tons; Scotch ports, 2618 tons. The decrease—Yorkshire, 1773 tons.

The settlement of the fortnightly account in the MINING SHARE MARKET, on Monday, was particularly heavy, and passed off well, and the business since transacted has been very extensive in several prominent mines, and a great rise has taken place in many. West Chiverton shares opened 60 to 61, and after a very large business leave off 69 to 70. It is not yet quite 12 months since this mine was purchased for 30,000s., or 10s. per share, and the rise, for a lead mine, has been most extraordinary and rapid. East Rose, once the richest lead mine in the kingdom, rose from 10s. to 1500s. per share in a few years, and when the shares were well circulated about; but Devon Consols (copper) rose in 12 months from 1024s. to 800,000s., at a time when the whole property belonged to some half-dozen individuals; and now West Chiverton, in 11 months, has risen from 30,000s. to 210,000s., when two-thirds, or 2000 shares, belong to three persons, who expect to see them at 100s. each. The ore sampled for the month, at West Chiverton, is 140 tons, estimated to produce 2800s., at a cost of about 1000s. Valpy's lode, in the 80 west, is worth 40s. per fathom; the 80 east, 30s. per fath.; No. 2 winze, 30s. per fath.; the 80 west, on Williams's lode, is worth 100s. per fath.; the 80 east, 20s. per fath.; No. 2 winze, west of Daukes's, is down nearly to the 80, worth 70s. per fath. Wheal Chiverton shares have advanced to 13, 14; the water is expected to be down to the 40 immediately. Chiverton Moor shares advanced to 6, 6½; East Chiverton, 5 to 5½. East Caradon shares have been very firm, and leave off 29½ to 30½; the report states that the lode is near at hand in the 80 cross-cut, which is a very important point; and if a good lode be cut, about which we have not much doubt ourselves, there will again be great excitement and dealing in the shares at advanced rates; but a poor lode, on the other hand, will cause great depression and uneasiness; and we trust the result, whatever it may be, will be telegraphed at once to the Stock and Mining Exchanges. West Seton, 190 to 200; at the meeting, held on Thursday, the accounts showed a profit of 1701s. 1s. 6d. on two months' working, and a dividend of 4s. per share (1600s.) was declared, leaving 866s. 10s. in hand. The ores sold, and to be credited in the next account, on April 12, realised 4886s. 8s. 11d. The lode in the 110 fathom level, 102 fms. west of shaft, is yielding 5 tons of copper ore per fath., worth 40s. per fath.; and as the best part of the lode is in the bottom of the level, it speaks well for the 120 fathom level. The ends, in the aggregate, are producing 11 tons of ore per fathom, and 35s. per fathom for tin. There are 38 pitches working, by 122 men, at an average tribute of 7s. in 11. Clifford Amalgamated, 37½ to 38, ex dividend of 10s. per share declared at the meeting; Cargill, 38 to 40. Gonamena shares advanced to 4½, but declined on Thursday to 4, and leave off 3½ to 4½. East Lovell shares have been flatter, and leave off 8 to 8½. Stray Park shares have been more in demand, at 30 to 31. Nangles shares also in request, and advanced to 36, 37. Wheal Crebor shares have been very largely dealt in, and leave off 44s. to 46s.; at the meeting the accounts, after charging everything up for new machinery, &c., showed assets over liabilities of 292s. 10s. 6d., but it was thought best to make a call of 1s. 6d. per share, to put the finances in a good position, and it is hoped and expected from this time the mine will meet its own cost. Cock's shaft will be down to the 96 in a few days, when levels will be commenced on a good lode. The 84 east is worth 6 tons of copper ore per fathom; and the 72 east, 1½ ton per fathom; this end is 40 fathoms in advance of the upper levels, leaving tin ground above unexplored.

West Frances, 26 to 28; at the meeting a call of 2s. per share was made. The 85 west is worth 16s. per fathom for tin; the 77, 11s. per fath. Cross-cutting has been commenced north to intersect the same part of the lode that the 85 and 77 are being driven upon; and there are about 2 fathoms to cut the lode. Copper Hill, 11 to 13; a correspondent suggests here that it is possible the agents are not driving upon the East Basset lode, and recommends a cross-cut north and south. It is well known that Buller was formerly abandoned for the want of something of this sort, and afterwards made enormous profits; and when it is considered that the East Basset lode was driven up to the boundary of Copper Hill, worth 70s. per fathom, and seemed to place the latter mine beyond a speculation, it is thought very extraordinary that up to this time nothing of equal richness or promise has been found beyond the boundary on Copper Hill. Calvadack, 6 to 6½; Camborne Vean, 2 to 2½; Cook's Kitchen, 19½ to 20½; Drake Walls, 38s. to 40s.; East Basset, 67 to 69; East Carn Brea, 7 to 7½; East Grylls, 13 to 14; East Wheal Grenville, 2½ to 2½. Wheal Grenville shares have been in great demand, up to 5½, 5½, and leave off 5½ to 5½; a correspondent, acting upon the advice given in this article three weeks ago, sent Captain Pascoe, the well-known manager of the adjoining mine (South Frances), to inspect Grenville, and the report which he has forwarded to us will be found in another column. It fully bears out the remarks we made; and, in a private letter accompanying the report, Capt. Pascoe says, "It will take six months to get the mine in good working order (including the new western shaft), but the stamps may be completed in three months, which will greatly increase the returns; and, if the mine continues to open up as productive as it has hitherto done, it will be in a position to pay good dividends." "Most of the tin," he adds, "has been raised from the ends; very little ground has been stoped, and not required for present returns." In conclusion, he says, "I do not know of any mine in this neighbourhood—I mean, any mine that it is not making dividends—that is likely to do so well as Grenville." This, from such an authority, must be very satisfactory to the shareholders. Great Wheal Busy shares have been very largely dealt in, and leave off 4½ to 4½; the lode at the engine-shaft is worth from 25s. to 30s. per fathom; Offord's shaft, 30s. per fathom; and other parts continue to look well. Prosper United shares have again fluctuated, and leave off 7 to 7½; the lode in the 80, west of Louisa's shaft, is worth 2½ tons of ore per fathom; the 70 east, on north part, 3 tons; the 70 west, 2 tons. Hington Down, 4½ to 5; and the lode in the 110, west of Harris's engine-shaft, 130s. per fathom, with every appearance of a continuance.

East Rosewarne, 2½ to 2½; the 75 west is worth 20s. per fathom, and the 65 west 15s. per fathom. The ore sampled, 135 tons of rich ore, will give a good profit on the two months' working. Wheal Kitty (St. Agnes), 7½ to 7½; the lode in the 72 east is worth 12s. per fathom, in the 15 east, 25s. per fathom. The mine continues to look well. Wheal Harriett, 1½ to 2; the lode in the 115 end has improved, and worth 1 ton of ore per fathom. The west stopes is worth 20s. per fathom; east stopes, 20s. per fathom. The points in operation on Alexander's lode are valued at 20s. per fathom. East Russell, 4½ to 5; Grambler and St. Aubyn, 10 to 11. North Buller shares advanced on Thursday from 3 to 6, and leave off 6 to 7, owing to an improvement in the mine. At the meeting a call of 12s. 6d. per share was made. The accounts showed a balance against the mine of 269s. 1s. 3d. The improvement referred to is in the 78 east; lode worth 8s. per fathom for copper. Great Retallack, 6s. 6d. to 7s. 6d.; Great South Tolgus, 4 to 4½. Great Wheal Vor shares have advanced to 20, 21. Great Wheal Fortune, 19 to 20; Marke Valley, 6½ to 7½; North Basset, 2 to 2½. Bryn Gwio, 35 to 36; the lode in the shaft is worth 1½ ton of lead ore per fathom. The 90 west is worth 1½ ton, and the 90 east 2s. 2½; here an improvement is expected. The stopes in the back is worth 2 to 3 tons per fathom. North Downs, 1½ to 2; North Treskerby, 2½ to 3; Pendean, 6s. to 6½; Providence Mines, 44½ to 45½; South Caradon Wheal Hooper, 10s. to 12s.; South Tolgus, 4½ to 4½; St. Day United, 35s. to 36s.; St. Ives Consols, 31 to 33; Tincroft, 20 to 21; Wendron Consols, 6 to 6½; West Caradon, 22 to 23; West Damsel, 90 to 95. Wheal Basset shares have advanced to 90, 95. Wheal Buller, 38 to 40; Wheal Kitty (Lelant), 12½ to 13½; Wheal Mary Ann, 13½ to 14½; Wheal Seton, 175 to 180. Wheal Trolawny, 22½ to 23, ex div. of 15s. per share, declared at the meeting. Wheal Union, 2½ to 3; Wheal Uny, 7 to 7½; Wheal Hope, 5 to 5½; Central Miners, 2 to 2½; Grylls Wheal Florence, 8½ to 8½. At North Wheal Crofty, in the 170

west, the lode has greatly improved in appearance, worth 45s. per fathom. In the 160 east the lode is worth 40s. per fathom. They sold on Wednesday 8 tons, at 73s. 10s. per ton. Wheel Unity, 5s. to 10s.; at the meeting a call of 3s. per share was made. The report was of a favourable character, and it was resolved that Capt. Roberts, of West Basset, should inspect and report upon the lode at the flat-rod shaft, as it was upon his recommendation that operations were carried on in that part of the mine.

GOLD IN WALES—EXTRAORDINARY RESULTS.—The produce of the Vigra and Clogau Mines for the past week was 296 ozs. 16 dwts. 10 grs. of Gold, from 10 cwt. 3 qrs. 23 lbs. of ore.

On the Stock Exchange there has been great animation in Mining Shares during the week, and prices have been well supported. The following quotations were officially recorded in British Mining Shares:—Devon Great Consols, 57½; North Wheal Crofty, 5½; Providence, 46, 45½; East Caradon, 28½, 29, 29½, 29¾; Grenville, 5½, 5½, 5½; West Chiverton, 63; Hington Down, 5, 5½; Wheal Seton, 177; Chiverton, 12½, 13, 13½; Great Wheal Vor, 19½, 20, 20½; North Wheal Basset, 2½; Tincroft, 20½; Wheal Ludcott, 3, 2½; Margaret, 18½. In Colonial Mining Shares the prices were:—Cape, 8½, 8½, 8½; Yudanamutana, 2½, 3, 2½, 3; Scottish Australian, ½. In Foreign Mining Shares the prices were:—Cobre, 35½, 36½, 36½, 36½, 36½, 36½; Don Pedro, ¼; Linares, 7, 6½; Montes Aures, 2½, 2½; Alamillos, ½, ½, ½; United Mexican, 7, 6½, 6½, 7, 6½; Pannucillo, 2½; St. John del Rey, 50½.

IRISH MINE SHARE MARKET.—Except in shares of the Mining Company of Ireland, we have no official quotations of actual transactions this week. Wicklow Copper shares were in request at 12s. 17s. 6d. (2s. 10s. paid), but none were sold, holders being firm. Connoree shares could have been procured at 19s. 6d. to 20s. Carysfort shares were offered for sale at from 16s. to 19s., just as the desire to exchange into other mines fell or rose with the speculators. Holders of shares in the General Mining Company for Ireland tried to bring about an improved quotation of these securities, but met with no buyers at their price of 4s. 2s. 6d. to 4s. 5s., which, otherwise, would have been an advance of 2s. 6d. to 5s. on last week's price. On the other hand, the Mining Company of Ireland shares (7s. paid), which closed last week in demand at 23s. 10s., rose gradually to 23s. 18s. 9d. cash, and 24s. for account, but the latter only nominally. In accordance with our prediction of last week, that "though the prospects of the company never were better, it cannot be expected that their shares will go much higher," the price has settled down to 23s. 5s., commanding much attention at that rate, only a few being on offer under 23s. 10s.

An influential company, with a guaranteed capital of 500,000l. sterling, has been inaugurated, and in next week's Journal its prospectus will be published in *extenso*. The object of the undertaking is to carry on a general money-dealing business with public companies only, with which class of business there is considered to be much less risk than in dealing with individuals, whose pecuniary position often cannot be accurately ascertained. The company is, we believe, the first that has been brought before the public in which the very excellent principle of "limit by guarantee," authorised by the Companies Act, 1862, has been availed of. Its advantages are, that the confidence of those dealing with the company, whether creditors or otherwise, is secured without the necessity of raising the enormous capital usual with joint-stock companies to accomplish the same object. The liability of holders of shares "limited by guarantee" is strictly limited to the amount subscribed (as is the case with all shares in limited companies under the Companies Act, 1862), but no payment in respect of shares "limited by guarantee" can be demanded whilst a company continues to carry on business. During this time the shares, although nothing has been paid upon them, participate to the same extent as if the full amount guaranteed had been actually paid-up. To prevent any who might be unable to contribute the amount guaranteed by them from becoming members of the company, it has been provided that every applicant for shares "limited by guarantee" shall give a reference to his banker, in order that his stability may be ascertained. The present is considered a very opportune moment for introducing the enterprise to the notice of the public, for although the price of money is high, the trade of the country is in a healthy and prosperous condition. The principle of "limit by guarantee," moreover, gives to the capitalist the opportunity of participating in the profits of business, and at the same time retaining his cash in the hands of his own bankers. The system of "limit by guarantee" is fully explained in another column of this day's Journal.

The General Property and Finance Company, with a capital of 100,000l., in shares of 10l. each, has issued its prospectus. The object of the undertaking is to carry on the business of a land and building society, and to render monetary assistance to builders and contractors. It is mentioned that private individuals who have conducted this class of business have in many instances realised large fortunes. The company will in no case advance money without having property mortgaged to it for the full value. The company will introduce borrowers to lenders, and will use every effort to secure moderate charges to customers, and considerable profits without risk to shareholders.

The London Gas Meter Company, with a capital of 100,000l., in shares of 10l. each, has been formed for the purpose of purchasing from Messrs. Bischoff, Brown, and Co., and developing the invention of Messrs. Kromschroder for an improved wet meter, now used by many of the metropolitan and provincial gas companies, who have fully tested its capacities, and proved its superiority over any other meter for correctness and simplicity. The business has more than doubled itself during the past year, and more capital being, therefore, required to sell to the company at a valuation, the vendors accepting two-thirds of the purchase-money in paid-up shares of the company. The vendors' shares receive no dividend until 7 per cent. has been paid on the remainder, but when 7 per cent. has been paid upon the whole capital for two consecutive years, the distinction between the two classes of shares is to cease. The services of the acting partner in the firm have been secured by the company for the office of manager.

The South Wales Colliery Company has issued its prospectus, the object of the undertaking being to lease or purchase coal fields in the South Wales basin. The capital is fixed at 200,000l., in shares of 25s. each, and 10 per cent. is payable on allotment. The chairman and deputy-chairman are Mr. Crawshaw Bailey, M.P., and Mr. R. W. Kennard, M.P., and the other members of the board are gentlemen of almost equal position. The South Wales exports for 1862 amounted to 2,378,971 tons, and the returns for 1863 will show an increase. The demand at Cardiff and Newport far exceeds the supply, in consequence of which the average price has risen from 8s. to 11s. or 12s. per ton, whilst the total cost of raising, royalty, and carriage to Newport is 6s. 9d. The workable thickness of the seams is 30 feet. A 50 years' lease of the seams, which are in the barony of Aberavenny, are offered upon advantageous terms. It is estimated that at least 20 per cent. upon the 75,000l. to be first employed will be realised.

The Frontino and Bolivia South American Gold Mining Company, with a capital of 100,000l., in shares of 2s. each, has been formed for working the mines of the same name in the province of Antioquia, New Granada. The prospectus states that the gold is disseminated through the lodes, as at St. John del Rey, and that specimens have been assayed by Messrs. Johnson and Matthey, and yielded at the rate of 463 ozs. and 28 ozs. respectively to the ton. The estates are freehold, and extend over nearly 5000 acres. Capt. W. Goyen, who has resided two years on the property, considers that the "property, as comprised in the two estates (the Frontino and the Bolivia and Juan Criollo) is equal, if not superior, to any in the known world."

At Truro Ticketing, on Thursday, 4664 tons of ore were sold, realising 25,081l. 14s. The particulars of the sale were:—Average standard, 137l. 1s.; average produce, 5½; average price per ton, 5l. 7s. 6d.; quantity of fine copper, 276 tons 11 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Jan. 21.	5529	144 6 0	5 ½	25 6 0	294 19 0
" 28.	3673	137 1 0	6 ½	6 5 0	95 4 0
Feb. 4.	3384	136 3 0	6 ½	6 1 0	93 11 6
" 11.	2664	134 6 0	6 ½	5 16 6	91 2 0
" 18.	4664	137 1 0	6 ½	6 7 6	90 15 0

Compared with last week's sale, the standard is stationary. Compared with the corresponding sale of last month, the decline has been in the standard 4l. 10s., and in the price per ton of ore about 5s. At the Ticketing, on Thursday, it was resolved, on the motion of Mr. Humphry Williams, that in future the time for commencing the ticketings shall be 11 A.M., instead of noon, as at present. At all ticketings after March 17,

miners offering for sale only 50 tons or under (instead of 80 tons or under), will be included in one ticket.

At West Wheal Seton meeting, on Tuesday, the accounts for Nov. and Dec. showed a credit balance of 2466l. 10s. The profit on the two months' working was 1701l. 1s. 6d. A dividend of 1600l. (4l. per share) was declared, and 864l. 10s. carried to credit of next account. The copper ore sold to be included in next account amount 4866l. 8s. 11d. Capt. C. Thomas, M. Bath, and J. Jennings reported upon the various points of operation. They have 33 pitches working by 122 men; average tribute, 7s. 11d.

At the Trelawny Mine meeting, on Thursday (Mr. R. Hallett in the chair), a dividend of 16s. per share was declared, which left an undivided profit of 98l. to be carried forward to the reserve fund, increasing it to 1100l.

At the Clifford Amalgamated Mines meeting, on Wednesday, the accounts for Nov. and Dec. showed a credit balance of 1564l. 3s. The profit on the two months' working was 1463l. 10s. 4d. A dividend of 1450l. (10s. per share) was declared, and 114l. 3s. carried to credit of next account. Capt. John Richards reported that, taking the prospects of the mine generally, they are looking well.

At the Wheal Polmar meeting, on Tuesday (Mr. W. Hancock in the chair), the accounts showed a credit balance of 300l. 16s. 2d. Mr. F. Barratt, Jun., was appointed purser, and his salary increased from 6l. 6s. to 8l. 8s. per month. Captain W. Rowe's salary was increased from 7l. 7s. to 8l. 8s. per month. A very kindly piece of ore ground has been opened on Smyth's lode east, at the adit level, and there is every confidence to be placed in the ultimate success of the undertaking, particularly in the eastern and southern ground. Capt. John Bailey and Wm. Howe reported that their tribute department was without alteration; they have four pitches at work, one man and one boy in each, at a tribute of 13s. 11d. They expect their next sampling will be as large, if not larger, than the last.

At Wheal Croft meeting, on Thursday, the accounts showed a credit balance of 292l. 10s. 6d. A call of 1s. 6d. per share was made. The report was considered very favourable, and they fully expect from this time the mine will pay its way, while the call puts the finances in a good position.

At the Nanteos Mine general meeting, on Wednesday, the reports read were considered highly satisfactory, and the accounts presented showed cash and arrears of calls, 1460l. 11s. 10d., as against the total amount of debts, 1522l. 16s. 10d., thus showing an available balance of assets over liabilities of 1807l. 15s.

At the West Wheal Frances meeting, on Feb. 10, the accounts for the three months ending November showed a debit balance of 852l. 5s. 5d. A call of 2s. per share was made. Captains Thomas, Mayne, and Craze reported upon the operations at the mine. Capt. Mayne having expressed a wish to retire from the more arduous duties of underground agent, it was resolved that Captain H. Bablyn be appointed underground agent, at 7l. 7s. per month, and that Captain Mayne be retained as surface agent, at 4l. 4s. per month.

At the Hawkmoor Mine meeting, on Feb. 11, the accounts for the four months ending January showed a debit balance of 176l. 3s., and a balance of liabilities over assets of 898l. 14s. 2d. A call of 2s. 6d. per share was made. Capt. J. Richards and J. Gifford reported upon the points of operation.

At the Wheal Prosper meeting, on Feb. 11, the accounts for the nine months ending December showed a debit balance of 1399l. 2s. 6d. A call of 1l. 8s. 10d. per share was made. Captains Stephens and Blissett reported that the driving of the 40 ft. level cross-cut, to intersect the north lode, will take about four months.

At Wheal Norris meeting, on February 11, the accounts showed a debit balance of 1319l. 4s. 10d. A call of 4s. per share was made.

At Polhigey Moor Mine meeting, on Feb. 11, the accounts showed a debit balance of 841l. 12s. 6d. A call of 1s. per share was made. Messrs. Peter Clynio, P. Puckey, C. E. Treffry, and W. West were re-elected as the committee. Captains Clynio, West, and Puckey reported on the mine: they are still of opinion that the mine is of great promise, being satisfied that the sett contains several good lodes; one in particular (the engine or Calvadnack lode) from which, in the adjoining mine, 40,000l. worth of tin has been raised.

At the Dolfrwyg Mining Company meeting, on Feb. 9 (Mr. Charles Henne in the chair), it appeared that 983l. 17s. 3d. has been expended in further opening the mine, and the liabilities on Dec. 31 were 419l. 16s. 8d. Since which a further sum of 255l. has been paid into the bankers, in respect of the call of 2s. 6d. made at the October meeting; so there remains a balance of 561l. 17s. 6d. still to be received. A call of 2s. 6d. per share was made. The works have been carried on with regard to economy, and the quartz lode laid open is of a very promising quality. The stamps ordered from Messrs. West and Sons have been delivered on the mine, and arrangements are being made with Messrs. Phillips and Darlington for their erection, and also for the erection of the necessary machinery for amalgamating the quartz. The stamping and amalgamation of 100 tons will be carried on under the superintendence of Mr. Phillips. The seat at the board vacated by Mr. Holroyd has been filled up by the election of Dr. T. M. St. John, elected a director in the room of Mr. Tregyan, and Messrs. C. Brown and G. H. Carbutt were re-elected auditors, at the remuneration of 10l. 10s. each per annum. [Some reflective remarks made by the directors on Capt. Williams, who are assured, are unwarranted; and must have originated in prejudiced feeling, or from information the correctness of which should have been ascertained before passing so severe a judgment.]

At the English and Australian Copper Company meeting, on Thursday (Mr. Routh in the chair), a dividend of 2s. 6d. per share was declared. The result of the meeting is given in another column.

At the Bon Accord Copper Mining Company special general meeting, yesterday (Mr. Adolphus W. Young in the chair), the report of the directors was taken as read. The Chairman said that the board had carried out the resolution passed by the shareholders in May last, which was to the effect "that the directors be, and hereby are, requested to carry out further explorations, at greater depth, in the Bon Accord property, taking and being guided by competent professional advice," and the result had been communicated in the report just submitted. He was sorry that the operations which had been projected had not been attended with the success of gold coal under as probable. Having referred to the main points in the report, he concluded by proposing "that the Bon Accord Copper Mining Company (limited) be, and hereby is, dissolved, and that the same, and the whole affairs thereof, be now wound-up voluntarily, under the provisions of the Companies Act, 1862." Mr. Jewitt strongly contended against the dissolution and winding-up of the company, and expressed an opinion that the whole of the available capital of the company should have been expended by the directors in sinking the engine-shaft to a greater depth; he was much disappointed that that course had not been adopted. Capt. Pearson Morrison (who had just retired from the colony, and recently reported upon the mine) stated he had advised the committee at Adelaide that there were no indications at the bottom of the engine-shaft—which was the greatest depth attained in the property—to encourage deeper sinking there, and he considered it would have been a waste of money to do so. He had recommended the explorations at the extreme south-west corner of the property, because he thought the "tailings" of Beck's workings might have been carried in that direction, and as that was the spot in which it was likely to meet with the continuation of the surface deposits of the Barra Barra. Mr. Jewitt said that the engine-shaft should have been sunk to a greater depth, even if the whole of the available capital had been so expended unsuccessfully. He blamed the directors for not having caused that work to be carried out, and considered that they had failed to act upon the resolution which the shareholders passed in May last. Capt. Morrison thought it probable that the ore hitherto worked in the Barra Barra, and which was in the form of a large bunch or deposit, down to the depth of 70 fathoms, would be found in the form of a regular lode 30 or 40 fms. deeper; and if so, such lode would, in all probability, enter the Bon Accord property. From the inclination of the country it would be found at the depth of about 115 or 130 fms.; which would render a very powerful engine and the outlay of a considerable capital necessary to work it, probably not less than from 15,000l. to 20,000l. Mr. Anderson considered that the directors had acted most judiciously, and in the only proper manner, in taking professional advice, as they had done, and being guided by it. To have expended money in searching for ore at greater depth would have been useless and unbusiness-like. He considered the directors had fully carried out the spirit of the resolution. A lengthy discussion ensued, during which an opinion was generally expressed that the proposition before the meeting would be supported, provided that steps be immediately taken to organise a new company, with enlarged powers, so as to be able to deal with the Bon Accord property in a manner that might be considered most desirable, and at the same time to avail themselves of one or more of the other mineral properties. The resolution having been put and carried, Messrs. Whetnam and Grainger were unanimously appointed auditors. Thanks having been voted to the directors, the usual compliment to the Chairman terminated the proceedings.

At the Mariquita and New Granada Mining Company (special) meeting, on Monday (Mr. Routh in the chair), the resolution authorising the directors to issue the unallotted shares was confirmed. Details in another column.

At the Portugal Iron and Coal Company meeting, on Tuesday (Mr. G. F. Young in the chair), assent was given to the condition upon which the decree of the Portuguese Government was granted for allowing the company to carry on its operations in Portugal. Details in another column.

The directors of the Glamorgan Iron Ore Company have entered into arrangements for the construction forthwith of the necessary works for bringing the seam to the surface, and until their completion the contractor has guaranteed to the shareholders interest at the rate of 4 per cent. per annum. The list of applications closes on March 8. The shares are quoted 1¼ prem.

NEWCASTLE-ON-TYNE, FEB. 18.—The Mining Market during the past week has been very active for West Chiverton, Chiverton, &c., at much higher prices, and when it is remembered the advance in the former is only an intrinsic merit, a fair margin above present rates is left for investors, as this great mine is really much below its value. Chiverton will also continue to command attention, as there seems little doubt that it will soon share the fame of its rich neighbour, West Chiverton. North Crofty, at present low prices, will do; perhaps there is no progressive mine so safe to hold for a few months for profit, it having the advantage of being as easily sold as bought, which is not the case with most mines.—EDWARD BREWIS.

GOLD IN WALES.—The accounts to be presented at the Vigra and Clogau Company's meeting, on Thursday next, will show a debit balance on the receipts and expenditure account of 562l. 4s. The expenditure during the six months ending December has been 4393l. 1s. 9d., whilst on the receipt side of the account the balance brought forward is 218l. 8s. 8d.; calls, 2100l.; and gold sold and in hand, 1512l. 9s. 7d.; 3890l. 17s. 9d.; leaving the debit balance of 562l. 4s., as above. The directors' report states that since the date to which the accounts extend the quantity of gold received at the office has been 1059 ozs. 6 dwts. 8 grs., of the value of 3972l. The quantity of quartz crushed is 41 tons 8 cwt. 2 qrs. 5 lbs., equal to 24 ozs. per ton. Some of the quartz worked has been of extraordinary richness, and the last week's return is the largest yet received from the mine, 296 ozs. 16 dwts. 10 grs., yielded from 10 cwt. 3 qrs. 23 lbs. of quartz, not including any part of the workings on poor ore, those pans being only tapped once a fortnight. Mosheim's machinery not having realised expectations, the Schenitz (Hungarian) process will be adopted.

GREAT WHEAL BUSY.—In my notice of this mine, in last week's Journal, I omitted to mention Old Hallenbeagle, which forms a part of the Wheal Busy sett, situate west of Great Busy workings, on parallel lodes, known by the name of the Wheal Rose north and south lodes. The mine having been idle for years, little was known of the prospects, until the Wheal Rose adventurers erected a powerful engine on their sett, and in draining to the 70 lft. Old Hallenbeagle drift to the 40, which enabled the Great Busy agents to explore the eastern part of the mine to that depth; the result was a discovery of a course of copper ore in the 36 ft. level, 70 fms. in length; tributaries at once commenced working on the runs of

ore, valued at 267l. 20s. 2d., 147l. 12s., and 102l., per fathom, giving the value of the lode in the aggregate at 1607l. per fathom. From the date of this discovery, in October last, until the end of November, less than two months, 7091l. worth of copper ore was raised, and sold at a profit of 450l. The wet season set in, and the water rose and covered the bottom of the level; but in a month or two this level will be again drained, and as Busy proper is now working at a good profit, the adventurers have resolved at the next meeting to divide this mine from Great Busy, and work it as a separate sett, giving each shareholder the same interest in Hallenbeagle as he holds in Great Busy. A winn-engine and crusher will be at the machinery required till the end of the year, when a small pumping-engine will have to be erected. I have no doubt the returns of the mine will pay for the machinery, and give great profits. To the present shareholders of Great Wheal Busy this mine is a valuable consideration, and I believe, if brought out as a new company, would command a premium equal to the present market value of the whole property known as Great Wheal Busy.

YUDANAMUTANA MINE.—We alluded last week to the arrival of the *Orient* from South Australia, with a considerable quantity of ore from this mine; and, in continuation, it is interesting to mention that thirteen blocks, varying in size from 1½ ton to nearly 5 tons in weight, have been landed at the London Docks, near the Marble Crane, where they will remain for a few days, and are well worthy the inspection of all who are associated with mining generally, or of this particular enterprise. They are indeed most remarkable, both as to size and appearance—wonderful specimens of the mineral lore of the northern districts of South Australia.

STRIKE OF COLLIERIES AT ST. HELENS.—The colliers employed at the Haycock Collieries, near St. Helens, belonging to Messrs. Evans Brothers and Company, have struck work, owing to the masters refusing to grant the alteration in the hours of labour demanded by the miners. The masters wish the men to work 12 hours per day, but the men refuse to work more than nine hours. The colliers employed at Messrs. Pilkington's Colliery, and at the Gerards Bridge Colliery, belonging to Messrs. Caldwell and McCormick, have also struck work on the same grounds.

ABERDARE, MERTHYR, AND LLANWYNNON COAL FIELD.—The coal returns recently made up show the coal get throughout the above coal field, during the year 1863, to be 3,254,975 tons. Of this quantity Aberdare produced 2,148,969 tons; Merthyr, 812,778 tons; and Llanwrynnon, 293,228 tons.

THE PROFITS ON GAS.—By a parliamentary return, quoted by the "Journal of the Society of Arts," it appears that the metropolitan gas companies paid dividends in 1862 as follows:—The Chartered paid dividends at the rate of 9 and 10 per cent., including back dividends at 1 per cent. per annum for the half-year to Christmas, 1856; the City of London, dividends of 9 and 4 per cent., with a balance of 688l.; the Commercial, 50s. 6d. on a capital stock of 322,196l. (less sums remaining outstanding); the Equitable paid dividends at all rates of 11, 14½, 15, and 10 per cent. (less sums remaining outstanding), with a balance of 395l.; the Great Central dividends at the rate of 6 and 8 per cent. (less sums remaining outstanding), with a balance of 18,445l.; the Imperial at the rate of 10 per cent., with a balance of 58,590l.; the Independent at the rate of 10 per cent., with one year's back dividend (1800l.), and a balance of 3548l.; the London paid 36,827l. on 548,843l. (less sums remaining outstanding); the Phoenix paid 10 per cent. with 5190l. dividend arrears for 1856, with a balance of 930l.; the Ratcliffe dividend was 8l. 18s. per cent., without a balance; the South Metropolitan, 10 per cent.; with a balance of 10,360l.; the Surrey Consumers', 10 per cent., with a balance of 487l.; the Western, 10 per cent., with 5285l. towards back dividends of less than 10 per cent.

BANKERS' LIEN.—In the case of Wyld v. Radford, before Vice-Chancellor Kinsler, the defendant being indebted to his bankers, sent them certain title deeds, with a letter, in which he stated that he thereby pledged his grant of coal under a certain estate, which he specified, as a security for the money advanced, and also as a "general cover" for his banking account with them. There were other estates belonging to the defendant comprised in the deeds sent. The Vice-Chancellor held that the bankers could claim a lien only upon the estate specified.

LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Sold on the 6th February.			
Brooklyn.	50	£15 3 0	Miners Co. of Ireland.
Sold on the 12th February.			
Cargill.	60	17 16 0	Treffry's Trustees.
ditto	4	4 10 6	ditto
Sold on the 15th February.			
Dyllife	78	14 16 6	Walker, Parker, & Co.
Frongoch	58	14 7 6	Miners Co. of Ireland.
ditto	58	14 8 6	ditto
East Darren	70	17 7 0	ditto
Goginan	22	19 16 6	ditto
ditto	10	19 0 0	R. Mitchell & Son.
Cwm Erfin	25	17 2 6	Treffry's Trustees.
ditto	35	18 1 6	ditto

WHEAL TRELAWNY.—In last week's Journal, p. 113, the price of 60 tons of lead said by this company, on Jan. 23, to Messrs. J. and S. Williams, is stated to be 23l. 1s. 6d. per ton, whereas it really was 29l. 1s. 6d. per ton.

BLACK TIN.

Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Sold on the 5th February.				
Wheal Sidney	4 11 0	£73 12 6	£35 6 5	Calenick Co.
Sold on the 13th February.				
GL. Wh. Vor	75 2 0	7	5728 1 9	—
Pendern Consols.	4 13 0	8 5 0	322 5 0	Boltho & Sons.

COPPER ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Sold by the PARTS MINES COMPANY, on the 17th February.			
LOT 1 (copper ore)	145	£6 12 0	Mons Co. & J. Radley
2 ditto	145	6 12 0	Mons Co.
3 ditto	65	6 12 0	ditto
4 ditto	2 17 6	9 17 6	C. Lambert.
5 (precipitate)	40	19 15 6	Mons Co.
6 ditto	20	11 16 6	ditto

COPPER ORES.

Sampled Feb. 3, and sold at the Royal Hotel, Truro, Feb. 18.					
Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols.	140	£5 6 6	East Caradon	55	£5 18 6
ditto	139	6 0 6	ditto	64	10 1 6
ditto	135	6 4 0	ditto	56	9 4 6
ditto	133	6 11 0	ditto	50	5 10 0
ditto	130	5 19 6	Marke Valley	83	2 12 6
ditto	127	5 16 0	ditto	82	2 15 0
ditto	126	1 17 0	ditto	61	2 18 0
ditto	123	4 15 6	ditto	60	3 0 0
ditto	120	6 0 0	ditto	60	3 3 6
ditto	118	5 14 0	ditto	40	6 18 6
ditto	114	6 2 6	ditto	35	2 0 0
ditto	113	5 6 0	Devon and Cornwall.	102	2 2 6
ditto	109	5 4 6	ditto	101	2 7 6
ditto	106	4 5 6	ditto	95	3 17 0
ditto	105	2 14 6	ditto	30	14 0 6
ditto	104	6 3 6	Bedford United.	12	5 3 6
ditto	87	2 11 6	ditto	38	6 9 6
ditto	82	6 0 6	Brookwood	47	5 6 6
ditto	80	4 11 6	ditto	39	9 16 6
ditto	79	2 12 6	ditto	39	9 16 6
ditto	67	1 8 6	ditto	23	2 4 0
ditto	64	4 14 0	Wheal Crober	69	4 7 6
ditto	60	12 16 0	ditto	49	3 11 0
ditto	55	2 18 0	Wheal Friendship	70	10 6 6
ditto	51	13 2 0	ditto	41	7 18 6
ditto	44	3 1 0	Bampfylde	46	10 12 6
ditto	4	47 0 0	North Robert	45	4 19 0
ditto	4	48 0 0	Sortridge Consols.	42	5 6 0
East Caradon	90	5 16 6	South Bedford	42	2 12 6
ditto	83	5 14 0	Wheal Arthur	30	3 12 6
ditto	77	6 5 6	Furdon	18	3 17 6

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CHIVERTON MINING DISTRICT.—A MAP of this celebrated district, embracing the whole of the FERRAN MINES, WILL BE PUBLISHED SHORTLY, by subscription, at 2s. each, coloured and mounted; or 16s. unmounted. Subscribers will be supplied in the order in which they give their names to the author, H. SYMONS, surveyor, Truro.—Truro, November 26, 1863.

CRENVER AND ALFRED MINING DISTRICT.—THE GEOLOGICAL AND MINING MAP OF THIS DISTRICT, now preparing, WILL BE PUBLISHED ON MARCH 1st. It will embrace the mines between Breage and Hayle, and from St. Hilary eastward to Crowan. Mounted, 2s.; plain, 15s. Subscribers' names may be forwarded to Mr. BRENTON SYMONS, M.E., 18, Hatton-garden, E.C.

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Notices to Correspondents.

* Much inconvenience has arisen in consequence of several of the Numbers during the past year being out of print, wherefrom the Journal should be regularly filed on receipt; it then forms an accumulating useful work of reference.

BLLENDE ORES.—In last week's Journal there is a notice of the sales of blende to a large amount, at the extraordinary prices of 5l. 4s., 5l. 7s., and 5l. 9s. per ton. The mine producing this ore is called South Lisburne. Can any reader inform me where it is situated, and any particulars of it, as it is not in the list of dividend or progressive mines? The mineral in question must be produced by a very extraordinary deposit.
—A CONSTANT READER.

PRICES OF PIG-LEAD.—"Salopian."—The prices of pig-lead, as published in the Journal weekly, are the market prices for transactions actually effected during the week; we believe they may be entirely depended upon.

CWMBRAN GOLD MINE.—Some time since Mr. Readwin promised, through the Journal, to inform the shareholders the results of the trials for gold, either "good, bad, or indifferent." At times we are favoured with a ghost of a report, but his promise has not been performed. Rumour is now current that a valuable deposit of visible gold has been discovered, and that the captain has been desired to keep it quiet. Really, Sir, those who have risked their money have a right to the information, more particularly as a meeting is summoned to take place to forfeit shares for non-payment of calls. If the past proceedings of the doings at the mine were ventilated, many who have benefited would have more consideration for their poorer brethren, and not forfeit shares in the present favourable state of the mine.—ONE WHO HAS SPENT YEARS AND HIS MEANS IN DEVELOPING GOLD IN WALES.

The paper on Mines, Mining, and Smelting in Italy shall appear in a Supplement to next week's Journal.

ESTHER UNITED.—In Capt. Brenton's report, in last week's Journal, the quantity of tin per ton is put ozs. instead of lbs. For instance, Pascoe's lode is stated to be (some of it) over 100 ozs. to the ton; it should be lbs.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, FEBRUARY 20, 1864.

It is probable that no single Act of Parliament has done more to encourage enterprise and promote the successful development of the industrial resources of the country than the "Companies Act, 1862," yet up to this time one of its most important provisions has been almost entirely overlooked; we allude to that which authorises the formation of COMPANIES "LIMITED BY GUARANTEE," concerning the very existence of which so little is generally known to capitalists that we avail ourselves of the present opportunity (a new financial company adopting the "limit by guarantee" system having been inaugurated) to explain the nature of partnerships of this description, and to allude to some of the advantages claimed for them. The readers of the MINING JOURNAL are already familiar with the discussion as to the combination of the "limit by guarantee" system with the Cost-book System, in order to secure the most desirable form of partnership for mining companies; but this is only an extremely limited application of the principle; the system of "limit by guarantee" is applicable to almost innumerable cases, and doubtless possess great attractions to capitalists.

That there are many transactions connected with trade and commerce where the trader possessing the confidence of those who have dealings with him may honourably and profitably carry on his business, with a merely nominal amount of actual cash, is well known; thus, a commission merchant's business, an insurance company, a banking company, and others, could be successfully carried on with scarcely any money-capital, provided the means be at the disposal of the managers of such undertakings to convince the public that there is an ample reserve fund to compensate for any trade losses that might be incurred, either from errors in judgment on the part of the management, or from absolute misfortune; the system of "limit by guarantee" enables such a reserve fund to be created with great facility, and prevents the possibility of its being drawn upon except by creditors, all of whom must derive equal benefit from it. The confidence which the public could place in a company "limited by guarantee" is beyond comparison with that which could be placed in it if incorporated as an ordinary limited company, because in the latter company operations could be continued until the whole of the working capital having been expended, nothing would remain for distribution to the creditors, whilst in the former company the whole of the guaranteed capital with which operations were commenced will always remain available to creditors, the sole power of calling up guaranteed capital being, by the Act of Parliament, vested in the liquidators, the directors and company having no power over it whatever; and the office of liquidator not existing until after winding-up has been resolved upon.

But the security which the system of "limit by guarantee" offers to shareholders is not less than that ensured to creditors, since, precisely in the same proportion as the safety to creditors increases, so have the shareholders power to prevent unnecessarily heavy debts being incurred, for the holders of the shares "limited by guarantee" being, so far as regards their power to obtain the winding-up of the company, in case it should be apparent that its business cannot be profitably continued, in the same position

as shareholders in an ordinary limited company; resolutions could be passed by any general meeting that liabilities beyond a given amount should not be incurred by the directors without the further sanction of the shareholders.

The advantage of the "limit by guarantee" system being acknowledged, it only remains to consider the principle upon which it is based, and this, we think, will be readily understood. It was assumed by the Legislature that there were many cases in which the object sought to be achieved by a public company could be attained without the immediate payment of cash, provided a material guarantee could be given to those actually doing the business, that they should, under no circumstances, incur loss—the Companies Act, 1862, enables this guarantee to be given. The chief feature in the system is that, by the acceptance of a *fixed limited responsibility*, the same advantage can be secured (as well in respect of profits as with regard to voting at meetings, and exercising all the usual rights of shareholders) as if the amount guaranteed had been *actually paid-up*. The advantage of this must be obvious: the sum necessary to cover the amount guaranteed may remain in the guarantor's own control, invested (say) in Consols, and thus be earning dividends from the company at the same time, and in addition to the Government Three per Cent.

We have hitherto alluded only to such companies, "limited by guarantee," as are exclusively under the ninth section of the "Companies Act, 1862," that is to say, where there is guaranteed capital only—where a company has both guaranteed capital and working capital, it will be obvious that the guaranteed capital shares will at all times (until all liability upon the shares subject to call has ceased by the payment of the full amount that can be called upon them) be in even greater favour than the working capital shares; because, as will be readily understood, the working-capital shareholders will be entitled to dividends upon the amount paid-up only; whilst the holders of the guaranteed capital shares will participate in profits in proportion to the full amount guaranteed from the moment they subscribe, although even under the most adverse circumstances of a wind-up they might not, and in carefully conducted enterprises would not, be called upon for one-fiftieth of the amount guaranteed. The system of "limit by guarantee" is capable of application to so many purposes, that it is difficult to form an estimate of the benefits that may accrue from it; and we trust that the undertaking, the formation of which has led us to give this brief exposition of the system, and which promises to offer very great advantages, not only to mine owners and mine adventurers, but to the industrial community generally, will be carried out with that integrity which will thoroughly convince the public of the paramount importance of the "limit by guarantee" principle.

THE COAL SUPPLY OF THE FRENCH IMPERIAL MARINE.

We have already noted (see *Mining Journal* of Feb. 13) the various points sought to be elucidated by the administration of the French navy with reference to the coal supply of the Imperial Marine. As the coal of each colliery, and even of each pit, was submitted to several experiments, the result is the collection of a great body of facts, which must be studied in detail in order to enable a precise idea to be formed of the complex properties which constitute what is called the quality of a coal. The experiments of the French Admiralty appear to give a great importance to agglomerates of *menus* or *briquettes*, and must stimulate their production. These, on being transported by railway to the ports, only experience a waste of 1 per 1000, while coal in lumps experienced a loss of 6 to 10 per 100. Again, piled up in heaps, agglomerates which have laid two years before being consumed—in the port of Algiers, for example—have preserved all their qualities, without experiencing any notable waste, while coal in lumps would have lost in the same time more than 50 per cent. Besides, the heating of boilers by agglomerates presents some special advantages; they contain little ash—4 to 7 per cent.—and, consequently, choke up furnaces but to a small extent, while they have a great homogeneity, so that heating operations are performed more uniformly and more surely by them. These advantages of agglomerates are precious ones for the French establishments, which have carried the fabrication to a much greater perfection than in England, and which in this regard are better in a position to satisfy the wants of the navy. The fabrication of agglomerates has, besides, another special advantage for French coal. A great deal of this coal, although burning very freely, and analogous in that respect to Newcastle, yet wants strength of fire, and has only a feeble calorific power as compared with Cardiff. But in the fabrication of agglomerates light coal can be mixed with coal less charged with gaseous matters, and the mixtures made in *briquettes* are found to be intimate and very superior to those which can be obtained with coal in lumps. Comparative experiments organised in the ports with regulation tubular boilers—that is, boilers of the same form and dimensions as those actually used on board French ships of war—have enabled French coal to be classed with precision with reference to English coal. To introduce some order into the comparison, it is necessary first to distinguish the French coal, which can be assimilated to Welsh (which is principally the coal of the departments of the Nord and the Pas-de-Calais), and that which can be compared with Newcastle—the coal of the Saône-et-Loire, the Allier, the Gail, &c.

The coal of the Loire, which is justly renowned for all industrial purposes, holds a middle place between the two qualities for the heating of steam-boilers; and the basin can especially supply the forging coal and coke requisite in the workshops of the Marine, as its coal presents in this respect qualities equal to those of the best English coal. The Cardiff coal was recommended especially for its calorific power; and a series of experiments proved that it vaporised in the regulation boilers 8.16 to 8.30 kilogrammes of water for every kilogramme of coal (a kilogramme, we may repeat, is the fiftieth part of an English cwt.) The Anzin coal, tested in the same manner, vaporised 8.13, 8.43, and 8.75 kilogrammes of water, and was, therefore, considered to be equivalent to the Cardiff coal; indeed, the average of the results of the experiments was even somewhat in its favour. The coal of the Pas-de-Calais yielded, again, nearly identical results; the Neux coal gave, for example, in a series of six experiments a vaporisation ranging from 8.03 to 8.41 kilogrammes. In the details referring to other qualities of coal no inferiority was to be seen in the coal of the Nord and the Pas-de-Calais, as compared with Cardiff. Their use at sea confirmed these remarkable results, and the French Marine may now obtain in the annual production of 2,000,000 to 3,000,000 tons of coal raised in this widely extended basin, the elements of supplies which it formerly sought in Wales. These elements, however, would certainly not suffice to meet the wants of the case, the Imperial Marine requiring also long-flamed coal, burning easily, capable of rapidly generating steam, and regulating speed at will. This description of coal was formerly furnished exclusively by the Newcastle basin. Coal richer in gas, but less rich in carbon than Cardiff, has a sensibly smaller calorific power. Thus a series of experiments with the best coal of the Newcastle basin gave a result of 6.30 to 6.37 kilogrammes of water vaporised per kilogramme of coal consumed, and the coal of the Saône-et-Loire and the Allier is more adapted to be substituted for that of Newcastle. Thus the first, through the medium of coal from Blanzay, gave 6.10 to 6.60 kilogrammes of water vaporised to every kilogramme of coal; and the second, through the medium of coal from Ferrières and Bézenet, in the Commeny basin, gave 5.85 kilogrammes to 6.40 kilogrammes of water vaporised. Although there was a slight difference in the quantities of water vaporised, the French qualities were considered equal (at any rate by the French examiners) to the English, while as regards some specimens, such was the solidity and cohesion that the advantage was in favour of the French coal. The coal of the Loire occupied a middle place between Cardiff and Newcastle, having given on a trial a result of 7.42 kilogrammes to 7.90 kilogrammes of water vaporised to every kilogramme of coal consumed.

The Marine, in comparing these various descriptions of coal, was enabled to indicate that the qualities from the Loire, amply sufficient in respect of calorific power, would be both superior in their use to the coal of Cardiff and Newcastle, if they had not the inconvenience of being a little too sticky on the furnace bars, and requiring the frequent application of large pokers, a labour which has the double disadvantage of being fatiguing for the stokers, and also of producing loss by the dropping of cinders. The problem of the attainment of a less great predominance of carbon than in Cardiff, and of a less great proportion of gas than in Newcastle, without the coal being as "sticky" as the majority of the qualities from St. Etienne, was solved by the mixture of the dry and half rich Anzin coal with poor long-flamed coal from Blanzay. This mixture was so made that the bars did not find themselves exclusively covered by one or other of the qualities named, and the combination appeared to unite all desirable objects; its power of vaporisation was 7.27 to 7.38 and 7.50 kilogrammes. The laborious and conscientious studies instituted by the French naval administration have not only had the effect of giving the Government all possible security and independence as regards its supplies of coal, but they have besides had the advantage of giving confidence to

coal-workers, and stimulating their production by causing the real qualities of French coal to be appreciated. "They put a period in this respect," says the committee of French coalowners, "to the habit of reviling our products, and to the Anglo-mania preferences of which we have been so long the victims."

It must be observed that the data given in this article are all French, and that we cannot be responsible for their accuracy. Assuming, however, that they are all correct, and that France can rely exclusively upon herself in supplying the combustible requirements of her Imperial marine, the English coalowners can afford to look on with unmoved equanimity. Our exports of coal have never absorbed only an inconsiderable proportion of our mighty production, and modest as the totals of the export movement are, they have been progressively extending of late. Thus in the fifteen years ending 1862, the exports of coal, cinders, and culm from the United Kingdom attained the following dimensions:—

Year.	Tons.	Year.	Tons.
1848	2,785,301	1856	5,879,773
1849	2,828,039	1857	6,737,718
1850	3,351,880	1858	6,529,483
1851	3,468,545	1859	7,006,949
1852	3,546,194	1860	7,821,532
1853	3,938,082	1861	7,856,115
1854	4,369,235	1862	8,317,913
1855	4,976,902		

The figures for 1863 are not yet made up by the Board of Trade, but those for 1862, at any rate, show that although French coal was in that year exclusively used in the French navy, the exports of English coal, &c., were never so large. We have already explained our reasons for thinking why the course taken by the French Admiralty has practically been attended with no adverse influence upon the English coal trade.

MANUFACTURE OF IRON AND STEEL.

Two important inventions have recently been specified by Mr. Robert Mushet, of Coleford—the first consisting of a particular admixture of crude irons, to produce a superior finished article; and the second, in a process of poling the iron, in a manner somewhat similar to that practised in copper smelting. The essence of the first invention consists in adding to melted iron or steel, obtained from melted pig-iron or cast-steel, decarbonised by the pneumatic process, a mixture of melted spiegeleisen with melted hematite pig-iron, or Swedish charcoal pig-iron, or other pure pig-iron from hematite iron ores, or in adding the said spiegeleisen and hematite and charcoal pig-iron separately, in order to improve the quality of the pneumatised iron or steel, and economise the manufacture.

The principal feature in the second invention consists in thoroughly mixing melted spiegeleisen, or other melted alloys of iron and other metals, with melted iron or steel, prepared by decarbonising melted pig-iron or cast-iron by the pneumatic process, by causing the streams of melted alloy and of the melted iron or steel to commingle and fall simultaneously into a heated ladle prepared to receive the said melted substances, and further to effect the said mixture, and render it more homogeneous, by means of the commotion and ebullition caused by forcing poles, or pieces of wood, beneath the surface of the said mixtures of melted alloy and iron or steel, or caused by forcing a blast of carbonic oxide, carbonic acid, or coal gas, through the said mixtures of melted alloy and iron or steel, whether contained in a heated ladle or in the pneumatic converting-furnace employed. He melts the spiegeleisen, or other alloy which it is intended to use, in an air-furnace, cupola, or melting-pots, so arranged that the spiegeleisen, &c., when melted can be run off along a gutter, or can be otherwise conveyed, so as to fall or so as to be poured into a heated receptacle or ladle intended to receive the melted iron or steel from the pneumatic converting vessel simultaneously with the said melted iron or steel. When the melted iron or steel in the pneumatic converting vessel or furnace is ready to be poured into a heated ladle, he turns the said converting vessel on its axis, and commences pouring its contents into the heated ladle prepared to receive it. At the same time he commences pouring the melted spiegeleisen, or other melted alloy, from a ladle or from melting-pots, or he runs the said melted alloy along a gutter, so that the stream of melted iron or steel from the converting vessel, and the stream or streams of the melted alloy, may commingle and fall simultaneously into the ladle or receptacle heated to receive them. When the mixture of the melted spiegeleisen, or other alloy, and the melted iron or steel effected in the manner described is found on trial to be imperfect, and the ingots produced are, consequently, unsound and not sufficiently homogeneous, he effects the more intimate mixture of the said melted substances, by taking poles or pieces of wood, preferably dry, and thrusts them down to the bottom of the ladle, and holds them there during the operation of pouring the melted alloy and the melted iron or steel into the ladle. The disengagement of gases from the wood occasions a violent ebullition of the melted metal beneath the surface of which the poles or pieces of wood are thrust and forcibly held down.

PURE COPPER PAINT.—A new pigment, calculated at the same time to increase the resources of the decorative painter, and to afford a ready means of preserving iron and other metals, has recently been introduced at Paris by Mr. L. Oudry, of the Auteuil Electro-Metallurgic Works. He first obtains an absolutely pure copper by throwing down the metal by the galvanic process; he then reduces the precipitate to an impalpable powder by stamping. This powder is then combined with a particular preparation of benaine, and used in the same way as ordinary paint; beautiful bronzed effects are produced upon it by means of dressing with acidified solutions and pure copper powder. The articles painted with the new material have all the appearance of electro-bronze, whilst its cost is less than one-sixth; it will last from eight to ten years. Mr. Oudry also proposes to substitute benzine oil for linseed and other oils, over which it possesses great advantages.

LECTURES FOR WORKING MEN.—METALLURGY: REDUCTION OF IRON FROM ITS ORES.—Dr. Percy gave a lecture on this subject at the Royal School of Mines, Jermyn-street, on Monday. The ores made use of for the extraction of iron are the oxide and carbonate. The reduction is effected either by the use of carbonic oxide, or by the direct application of carbon at a high temperature. The Hindoos were workers in iron at a very early period, and the method they adopted is analogous to what is now used in England and Sweden at the present time. The lecturer now gave a description of the Catalan forge, which has been used for a long time in the Pyrenees. A simple method of obtaining a blast is by a column of falling water; the only drawback is the moisture which accompanies this draught, thereby lowering the temperature of the furnace. Notwithstanding this, the method is still used in Spain, where the supply of water is abundant. Reference was now made to the British blast-furnace, and the reduction of the ore was explained. The ore is mixed with coke and limestone in alternate layers, and on the coke being ignited, a blast of air is injected into the furnace. Carbonic acid is the first product of combustion, then, passing through the heated stratum, is resolved into carbonic oxide, and when again reaching the state of the higher oxide, reduces the ore to the form of cast-iron; the slag which accompanies the process floats on the surface of the metal, and is easily withdrawn. The cast iron is rendered malleable by hammering, or by compression through rollers. The cold-blast formerly used is now superseded by the heated one, and an enormous saving is obtained in fuel. This improvement may be classed as one of those things which has influenced the destinies of mankind. Allusion was made to the economising of the flame which issues from the top of the furnace, by its application to the heating of boilers. In Sweden, charcoal is used instead of coke in the reduction of the ores, and the iron is found to be superior from the absence of sulphur; this is, however, only relative, for one kind of iron may be serviceable for a special purpose when charcoal iron is not. Our coal generally contains iron pyrites, and this sulphide of iron passes into the metal, affecting its quality. After the lecturer had dwelt on the method of puddling, he referred to the manufacture of steel, and explained the Bessemer process.

At the annual meeting for the election of officers of the London Association of Foremen Engineers, recently held at St. Swithin's-lane, City, Mr. Joseph Newton, of the Royal Mint, was unanimously, also for the sixth time, chosen as President. Mr. W. M. Oubridge, of Messrs. Simpson's, Pimlico, was on the same occasion elected Vice-President of the association.

PATENTS.—It appears from some elaborate statistics compiled by Mr. G. Shane, of Birmingham, that the number of patents applied for in 1863 was 3309, against 3490 in 1862, 3276 in 1861, 3196 in 1860, 3000 in 1859, and 2875 in 1858. These figures display a curious regularity in the efforts of the inventive talent of the country. Of the patents applied for last year 24 referred to sewing-machines; 50 to wearing apparel and fastenings for the same; 33 to dressing and finishing woollen cloth and other woollen fabrics; 108 to warping and weaving machinery; 225 to balling, cleaning, and preparing cotton and other fibres; 20 to breaks, drags, and retarding apparatus; 20 to axle-trees and axle-boxes; 30 to wheel carriages; 20 to rudders and steering apparatus; 32 to sheathing and preserving ships' bottoms; 75 to ship and boat building, ships' fastenings, bolts, and pins; 50 to power obtained from undefined and sundry elements and sources; 43 to furnaces, and furnaces feeding, saving fuel, and consuming smoke; 113 to railways, locomotive engines, and carriages; 47 to marine engines and propelling machinery; 82 to steam-boilers and generators; 93 to steam-engines; 29 to anti-friction, composition, and arrangements; 53 to shot and projectiles, shot and powder cases, and fireworks; 43 to ordnance and gun-carriages; 82 to fire-arms; 28 to locks, latches, and fastenings for doors; 31 to nails, bolts, screws, nuts, and rivets for machinery; 21 to metallurgical operations; 46 to sawing, planing, turning, and boring metals and wood; 38 to punching, die-stamping, stamping, carving, and ornamenting metals; 21 for tinning, casting, and plating metals; 28 for reaping and mowing-machines; 22 for threshing, separating, winnowing, and

dressing grain, &c.; 32 for distilling apparatus; 30 for pumps; 29 for pipes and tubes for water, steam, and gas, and joints for ditto; 45 for cocks, taps, and valves; 65 for lamps, lanterns, chandeliers, and candlesticks; 30 for the generation of gas; 39 for warming and ventilating buildings, ships, carriages, &c.; 32 for stoves, grates, fire-places, and kitchen ranges; 26 for tunnels, bridges, arches, portable, and other buildings; 23 for letter-press printing machinery, setting up and distributing type, &c.; 20 for barometers, pressure-gauges, thermometers, and hygrometers; 53 for telegraphs, and making signals, cables, &c.; 40 for working mines and raising minerals; 22 for reducing and smelting ores; 33 for iron manufactures; 25 for steel manufactures, &c.

THE GOLD FIELDS OF BRITISH COLUMBIA.

The discovery of America is truly one of the most important events in the history of mankind. The Spaniards, the first to make this great discovery, have also been the first to lose their possessions there, and England is now the only European nation of all those who have from time to time sent colonists to the West that retains any great hold on that vast continent. From Newfoundland to Vancouver's Island, right across North America, are our colonies scattered. The great importance of these dependencies to the British Crown can hardly, at the present time, be over-rated. The increasing commerce between England and the western shores of America compels us to maintain a naval force in the Pacific for the defence of our traders; and as a station for our fleet in those waters no spot could possibly be more suitable than the harbour of Esquimaux, in British Columbia. This harbour is one where the largest fleet may lie at anchor at all seasons of the year, and is so perfectly land-locked on all sides that with little difficulty it might be made practically impregnable. The abundance of rich timber which covers the shores of British Columbia, and the great seams of coal in Vancouver's Island, enhance the value of this colony to us as a naval station, and it can be a matter of astonishment to those who from experience can appreciate the natural advantages of this spot over any other in the Pacific, from Behring Straits to Cape Horn, that the home Government has paid no attention to the repeated proposals of our admirals in charge of this branch of our fleet to establish Government docks and arsenals at Esquimaux. This is an important consideration, but there is another reason for paying particular attention to our youngest colony. Until very recently the rocky mountains were considered an insuperable barrier to an overland communication between the Atlantic and Pacific Oceans. Late explorations across this chain of mountains have, however, proved that there are several most feasible passes across them, and it is proposed to construct a railway from Canada to British Columbia. If this be possible, and we cannot see why it should not, the advance of British America will be even more rapid than it has hitherto been. No human society advances more rapidly to wealth and greatness than a colony of a civilised nation, which takes possession of a waste country, or of one so thinly inhabited as the western corner of North America. The progress of our colonies in that part of the earth is, however, to be attributed rather to the metallic wealth which has been found in them than to the richness of the soil, or the superior civilisation of the first colonists. In proof of this assertion, let us trace our connection with Vancouver's Island from the time when George Vancouver sailed from England, 73 years ago, to defend the English traders at the port of Nootka from Spanish interference. George Vancouver, in this voyage, first proved the insularity of Vancouver's Island, which before that time was thought to be a part of the main land. This discovery, however, attracted but little attention until 1843, when the Hudson's Bay Company landed some settlers to prosecute the fur trade, on the same spot as is at present occupied by the colony of Victoria. The home Government, to encourage colonisation thither, afterwards granted the island to the same company for a term of years. Despite these endeavours, the growth of the new community was slow, and the number of settlers few, until the year 1850, when coal was discovered at Nanaimo, on the north-east of the island. Immediately the value of the colony increased a hundredfold, as the want of this most valuable mineral had hitherto retarded the advancement of the Western nations of both North and South America. Simultaneously with the discovery of coal on Vancouver's Island, Captain Roomey found small quantities of the most precious of all metals, gold, on one of the Charlotte Islands, to the north.

The destruction of Capt. Roomey's ship by the natives, and the consequent loss of the treasure, buried the announcement in temporary obscurity, and it was not till the year 1856 that gold was found on the mainland by wanderers from the gold fields of California. With electric speed the good news spread, and the announcement of some good finds brought crowds of diggers from all countries. To maintain order in the motley mass that there accumulated, and to protect the original settlers, the English Government acknowledged the new colony as a dependency of the British Crown by Act of Parliament in 1858. By this Act the limits of the new settlement were defined, as follows:—The colony to be called British Columbia, and to be bounded on the north by the sources of the Fraser River, on the south by the frontier line of the United States in the 49° of latitude, on the east by the Rocky Mountains, and on the west by the Pacific Ocean. The area within these limits is nearly 500 miles long by 300 miles wide. The eastern boundary—the Rocky Mountains—is the northern extremity of that great chain called the Andes, and which divide the continent of America into two regions, which differ greatly in climate and physical character. Thus that half which lies to the west of the Rocky Mountains has a far superior climate to the eastern half, and Sir J. Richardson tells us that the mean temperature of places on the same parallel of latitude is 20° higher on the Pacific than on the Atlantic side of British America. One of the causes which tend to produce this great difference lies in the fact that the air currents of those regions blow from west to east, and thus as the clouds, saturated with moisture from the ocean, approach the high land they deposit the moisture they contain on the western slopes of the Rocky Mountains, and ameliorate the climate of those regions. The physical configuration of British Columbia, on the mainland west of the Rocky Mountains, is by means of the spurs thrown off from that chain divided into three distinct portions. Of these, the first, or maritime territory, varies in extent, as the sea Alps or coast Cordillera recedes from or abuts on the shore; the second great division is the extensive high land or plateau enclosed between the sea Alps and the first chain of the Rocky Mountains; and the third division is that included between the parallel ranges of the Rocky Mountains proper. The climate and the vegetation of these three divisions is as varied as their different altitudes would lead one to expect. On the coast there is a dense mass of vegetation, nearly impenetrable, but which after passing the sea Alps becomes thinner, and the surface of the country gradually opens up. Passing thence into the high table land, we have there the rich grazing lands of British Columbia. The productive soil of this, the plateau land, disappears as we approach the snow-capped peaks of the Rocky Mountains. We can then easily account for the varied reports of settlers in British Columbia with respect to the healthiness of the climate, by the fact that we have there a varying temperature and soil, with a varying altitude from sea level to 16,000 feet above that level.

Having, then, in some degree accounted for the extraordinary capriciousness and variability of the climate of British Columbia, we will follow the discovery of the precious metal from the time it was first found on the mainland. To explain the position of the gold fields, we must describe the main rivers of British Columbia, of which the most important are the Fraser and Thompson rivers, which empty themselves, through one channel, into the Pacific, exactly opposite the town of Victoria, on Vancouver's Island. It was on the banks of the Fraser River, and 50 miles from its mouth, that gold was first found on the mainland. This river is navigable by steamers 50 miles further up, that is 100 miles from its mouth, but beyond that point the river was through the mountains, that hem it in so closely that it becomes little other than a thread of water, forcing its way with headlong speed. Ascending further towards its source, we find the river expands, and receives numerous tributaries, which in their tortuous windings water a vast tract of rich land.

Now, as to the gold, it is found not only along the banks and up to the very sources of the two main rivers and their tributaries, which we have mentioned, but also along the river terraces, which form a striking feature in the geological formation of those rivers. In the first subordinate chain of the Rocky Mountains, which forms the water-shed of the Fraser and Columbia Rivers, and known as the Snowy or Peak Mountains, will eventually be found the veins from which the alluvial gold on the table land has been derived. The great drawback to the development of the gold fields of British Columbia is the fact that the richest finds have been in the most inhospitable regions, and in regions where Europeans cannot remain during the severe cold of the winter. If, however, as we are told, there is an abundance of auriferous ground on Vancouver's Island, we shall, during the coming spring, witness a great rush to British Columbia. The accounts given by the correspondent of the *Times* of the riches of this, our youngest colony, were painfully exaggerated, yet, in the main, they were true, as is testified by the numbers who have left that country, hav-

ing acquired comfortable fortunes. Still in its infancy, British Columbia is one of our most promising, if not one of our most valuable, possessions, and offers a brilliant field to those who, temperate and thrifty in their habits, are willing to forego the temptations inseparable from life in a young colony. To such we can only say emigrate, and in British Columbia you will prosper beyond your brightest expectations.

FOREIGN MINING AND METALLURGY.

The abundance of orders increases in Belgium, and pig begins to feel the effects of the development communicated to the production of the rolling works. Transactions in refining pig have been concluded at an advance, mixed pig having made 3*l*. 4*s*. and hard iron, first quality, 3*l*. 8*s*. per ton. Casting pig is also very firm. The Forest blast-furnaces, the products of which advantageously replace the best wood-made pig, even in the manufacture of arms, have maintained a price of 4*l*. per ton for their No. 5, and 4*l*. 2*s*. for No. 4, in different transactions which have been concluded recently. It must be observed, however, that blast-furnaces generally, as well as the majority of the rolling-works, will only profit slightly before the end of the year from the amelioration resulting from present prices, both furnace and rolling-works having the greater part of their production engaged before hand at the old rates. Rolled iron is quoted at 6*l*. 12*s*. but more generally at 6*l*. 16*s*. for No. 1, 7*l*. 8*s*. for No. 2, 8*l*. for No. 3, and 8*l*. 12*s*. for No. 4. A Charolier letter says:—"The reduction in the Customs duties levied on foreign coal and coke on their import into France is a new proof of the necessity which each country now experiences of obtaining coal at a cheap rate. This necessity is so important that, in order to endeavour to satisfy it, Governments are led to grant sponsering reductions of customs. One is, therefore, astonished, in presence of such far-seeing views, which reflect the greatest honour on the sagacity of the Imperial Government, that it hesitates for an instant to apply on the communication which unites Paris to Charolier the system which it has inaugurated on that from Paris to Mons. The new Customs' reduction, which forms the object of the decree of Jan. 27, will certainly improve the position of French industry; but it will not remove the inequality in economic conditions resulting from certain French departments from the non-purchase of the means of communication uniting Paris to Charolier. After, as well as before the decree of Jan. 27, industries placed in a position to consume Charolier coal will remain burdened with an extra charge of 2*s*. per ton at the least, as compared with those situated so as to receive Mons coal. After, as well as before the decree of Jan. 27, there will be two classes of industry, and the privilege which one will enjoy, as compared with the other, will not disappear until the Government has purchased the French Sambre and the junction canal. The winter weather which we have had of late, and the large demand for beetroot sugar, which commences usually in the course of March, assure, according to all probability, a good current of affairs in coal during the spring; and, without daring to affirm that an early rise in prices will take place, we believe, nevertheless, in a great firmness in quotations."

The improvement reported in pig at St. Dizier has scarcely been sustained. It will be recollected under what circumstances a rise of 4*s*. per ton was produced; it was offered by a purchaser who was a stranger to the group, and was, naturally enough, very favourably received by sellers, but the transactions entered into were not of sufficient importance to sustain quotations at 5*l*. per ton—still further, other intending purchasers withdrew, not wishing to pay a price which they did not consider justified by the state of the iron market. Nevertheless, some traces of the late upward movement have remained, and two transactions, comprising 300 tons, have been concluded—one at 4*l*. 18*s*. and the other at 4*l*. 17*s*. 6*d*. per ton; at the last date there were offers at 4*l*. 18*s*. per ton. The average course of pig in January at St. Dizier was calculated at 4*l*. 18*s*. 2*d*. per ton. The usual good period of the year for the sale of iron in France is now approaching, but the demand does not revive, and prices remain stationary; still hopes are entertained at St. Dizier of an early revival, which will be reflected in a more active demand, and in a greater firmness of prices. Thus of late the coast market of France, which has hitherto been closed by English competition against St. Dizier firms, has forwarded some rather important propositions to them, and it is believed that the stock of foreign iron being exhausted, and it being impossible to renew it, in consequence of the marked rise in prices in England, this outlet will be re-opened to the French iron trade. The south of France has also sought recently to do some business in iron in the St. Dizier district, but the prices offered are not sufficiently attractive to induce ironmasters to be in great haste to accept them. If, then, there are no transactions of marked importance to note at St. Dizier, it can at least be observed that requirements present themselves, and must be satisfied. Rolled iron, in the last week, with a scale of 4*s*. to 8*s*. between classes; hammered iron, 10*l*. 8*s*. 10*l*. 12*s*. per ton; and machine ditto, 9*l*. 12*s*. per ton in warehouse at the works. The situation of the iron trade at Metz is said to leave much to be desired; although a revival appeared probable, and orders became abundant recently, this improvement has not continued; nevertheless, stocks do not accumulate. Merchants' iron, first class, sell here at 8*l*. 7*s*. 4*d*. per ton, taken in the warehouses of works, and they have also changed hands at 8*l*. 8*s*. per ton in warehouse at Paris.

The comparative feebleness of the English market for copper has been in some degree re-produced at Paris, and some transactions have been noted at slightly lower prices; English ir plates made 105*l*.; Lake Superior, 120*l*.; and Chilean, 103*l*. At Havre, Chilean, which had risen a few days since to 104*l*., has again given way, and remains quiet at 101*l*. to 101*l*. 4*s*. The total sales effected in January were 375 tons of disposable, and 715 tons to be delivered at a future date, and the stock left on hand, February 1, was 3120 tons. The stock of United States copper has sensibly diminished at Havre, and the high prices paid at the places of production permit only slender hopes of reinforcements for the market; in January, 18 to 14 tons were dealt in, and the stock remaining, February 1, was reduced to 112 tons, of which 9 tons were Minnesota, which is now quoted 124*l*. to 126*l*. per ton. The copper of the Society of Commerce is held at Amsterdam at 61*fl*., but is a shade more feeble at Rotterdam at 61*fl*. and 60*fl*. At Hamburg the stocks of copper remain very limited, and holders maintain their pretensions firmly. The Berlin market continues very firm, but is, nevertheless, without activity; in other words, great transactions make default, but for small lots full prices are demanded. Swedish, English, and American copper continue very firm at Stettin. The Italian Government will sell, March 1, 1864, in the Office of the Public Debt and Public Works, 300 tons of old copper money; the adjudication will be effected by sealed tenders, and by lots of 100 tons each. The demand for tin has remained without importance at Paris, and the various qualities have experienced a fall of about 4*s*. per ton; Banca has made 126*l*.; brilliant Detroit, 124*l*.; and English, 118*l*. per ton. At Amsterdam and Rotterdam, the position of the article is feeble, and Banca has fallen from 71*fl*. to 70*fl*. 7*s*. while holders obtain even this last price with difficulty, and purchases might even be made, perhaps, at 70*fl*. The Hamburg market has remained quiet, and without variation in prices; Berlin and Cologne closed at the last dates sellers and prices are not very well sustained. Rough French and Spanish lead are maintained at 22*fl*. 8*s*. per ton at Paris. The demand for lead appears to have revived at Havre, but stocks, as well disposable as arranged for, are very much reduced. At Hamburg transactions are limited, but prices are very firm, and tend to rise still further; at Berlin, also, prices are well sustained. Rough Sluysian zinc is maintained firmly at Paris, by holders, at 22*fl*. 8*s*. per ton. The Breslau market is also in a very good position, and the disposable quantities which present themselves are rapidly removed. At Hamburg the demand is very good, and various lots have been dealt in at rising prices.

M. Laur, a French mining engineer, already favourably known by his interesting works on the auriferous bearings of California, accompanied the French army now in Mexico on a professional mission of inspection, and he has addressed to General Bazaine a very minute and detailed report, of which it may be interesting to present an analysis. The silver mines of Mexico were only worked after the arrival in the country of the Spaniards, towards the middle of the 16th century; but they have yielded since then products the value of which is estimated at 600,000,000*fr*. At the present time, the value of the silver produced in the country is estimated at 320,000,000*fr*. per annum. A century later than this, at the commencement of the 18th century—the return had reached a total of 1,000,000,000*fr*. annually, and it had been further carried to 5,000,000,000*fr*. in 1809, the year of the Mexican insurrection against Spain. Three years later, in 1812, the production was only 920,000,000*fr*.; but since then, notwithstanding the misery and disorder which have prevailed in the country, the extraction has revived little by little until it has now reached an annual total of 1,600,000,000*fr*. The principal mines of the country are now working, and earth as regards the production of silver is not so much exhausted as it was some years ago. Questions referring to the mines of Mexico, the first having reference to the extent, power, and extraction of mines of gold and silver; and the second, to the difficulties which at present attend the efforts of a miner, who is possessor of a bar. In the first place, are the mines of Mexico known and worked over the whole extent of the argentiferous bearings, and are the parts worked completely exhausted? M. Laur arrives at the conclusion that they will still furnish supplies of ore for a long time to come. The bearings of gold and silver are found in lines, directed from the north-west to the south-east. The most important of these lines is developed over a distance of more than 1900 miles, following the direction of the Pacific coast. This great line has been attacked at its two extremities, but in the centre it has been defended by the Apachian Indians, who have hitherto prevented miners from exploring this part of the country, which presents the same geological constitution. The mountainous chain to which we have been referring may be regarded, then, as a kind of metalliferous road, of which the two extremities only are in working—to the north California, producing 8,000,000*fr*. of gold annually, and to the south Mexico, returning 4,000,000*fr*. of silver at least. Between the two the barbarian still holds undisputed sway; but whatever may be the fate reserved to this remote and, at present, inaccessible region, there can be no doubt that the portions of Mexico immediately approachable, although the oldest mining districts, still hold in reserve enormous wealth for future works. After having given some examples of this last assertion, M. Laur concludes that in the working of mines in Mexico a check will never be experienced from an insufficiency of bearings, but still the working conditions leave much to be desired. The difficulties which the miner experiences are stated by M. Laur, and we may also sum them up briefly. The first obstacle with which the miner, who is possessor of a bar of silver metals, is to realise the value of it in money. He may address himself to commerce, which buys bars to export them in a contraband fashion, but this mode is ruinous. The standard of the ingot is always very uncertain, the time occupied in its arrival on the markets of Europe is generally very long, and the risks of the road are very great. The merchant, again, does not exchange his plastras for the receipt in consideration of a very large profit, while some dealers, who are as much as 40 per cent. above the value of the ingot. Much the best plan for the miner is to wait until having grouped together an important sum, he can organise a convoy of bars, which can be escorted by armed men as reliable as possible, and which may be directed towards the *hotel des monnaies* nearest to the mines. This first transport forms a tax of about 1/2 per cent. on the silver, which has also to sustain the following further burdens:—A rent of 3 per cent. in favour of the State; the tax of miners, established for the endowment of the College of Mines, and equal to 1/16 per cent. on the value of the silver; the expenses of casting and assaying, variable according to the ingots, but ordinarily fixed at 1*fr*. per piece; the expenses of refining; and, finally, the deduction for expenses of exportation, which amounts to 4-1/2 per cent. on silver and 4-7/10 per cent. on gold. It follows that before being converted into Mexican plastras an ingot just come from the mines must undergo in taxes and expenses of every kind a total deduction of about 9 per cent. This is the official deduction, but it is always exceeded and carried to more than 11 per cent., as the manufacture of Mexican monies is delivered without any real control to private contractors, who have obtained their privilege by making very large loans of money to the Government which has conceded it. The silver brought to light does not remain in Mexico, as that country requires from abroad all kinds of products, and has only to give in exchange its coined silver and gold. But, before reaching the European markets, the precious metals obtained must support further expenses—export duties, 6 per cent.; expenses of convoy (a species of insurance against the brigandage which infests the roads), 1-2/10 per cent.; commission and expenses of embarkation at Vera Cruz, 7-1/10 per cent.; freight from Mexico to (say) France, 1-1/10 per cent.; insurance

and sea-risks, 1 per cent.; and interests, 1-1/2 per cent.; making a total of 11-25/100 per cent. Thus, while Europe forwards to Mexico all the manufactured products which the present state of its civilisation demands, Mexico, by an inverse current, dispatches to Europe the gold and silver which form the product of its mines. It will be seen, on recapitulating the preceding data, that in this movement the precious metals support expenses the total of which does not amount to less than 22-25/100 per cent. of the value of the products obtained. Such is the present state of mines in Mexico, and hence the inexhaustible mineral wealth of the country finds itself now worked only on a small scale, and under unfavourable conditions.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

FEB. 18.—The Iron Trade remains much as it was. Orders are not at present coming in rapidly, but those on hand are of large amount, and there is the utmost confidence that present prices will be maintained, some looking for pressure at the end of the present quarter. One reason why buyers are just now holding back is probably that prior to the last advance of 1*l*. an actual rise of 30*s*. was, in numerous instances, accorded to; and the fact that the advance was only 1*l*. led, it is believed, to doubts as to the real state of the trade. From the advance in wages, pig-iron, and coal, it is certain that those who have to buy pigs and coal are making less profit than prior to the first advances, and this forms a strong ground for anticipating that the advance will last. The Hardware Trades are generally pretty good, and in some branches are brisk. The foreign demand is quiet.

A strike of the men employed by Messrs. John Bradley and Son (Mr. W. O. Foster, M.P.), at Stourbridge, has terminated. The strike was to compel the firm to employ three men who had been discharged. The Union gave their consent to the men returning to work, if they could get the consent of these three men. It is said that two consented, but that the third wanted 300*l*., and was offered 100*l*., to give his sanction. This appears to have been a case in which the Union stretched its authority unduly, but the matter is now arranged.

REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

FEB. 18.—The Iron Trade is in a healthy condition, and, judging by the orders in hand, it is likely to remain active for a very considerable period. The orders from the Continent are, on the whole, exceedingly good, and very considerable quantities of machinery are being sent away weekly. The make of railway iron, and the trade in railway springs, is increasing weekly at Sheffield, until the make at one firm amounts to 150 tons per week. The Steel and Cutlery Trade is very active, and the orders given are increasing, and, with the spring, it is anticipated that the trade will be much greater. The Coal Trade is now permanently improved, and the demand for the London market is as great as it was before Christmas. The weather, too, is favourable to the demand, and the eastern markets are also buying largely. The South Yorkshire coalmasters are very full of orders, and the only difficulty is to find rolling stock to convey the mineral, as there is great scarcity of mineral wagons. The eminent firm of Messrs. John Brown and Co. is to be merged into a limited liability company, the present partners taking a large quantity of shares. The increasing demand upon the attention of the partners is such as to be more than can be borne by individual members.

A large tract of minerals has been purchased this week in the neighbourhood of Alfreton; and it is intended during the present year to build extensive works, which will afford employment to a large number of work-people, and which will be a great boon to North Derbyshire generally. Several pits are to be opened, blast-furnaces erected; and it is not at all improbable that a large forge will be built for the manufacture of iron; indeed it is certain that, with the new works at Pilsley, of the Claycross Company, and the new works here indicated, a new and important era will be developed in Derbyshire. Capitalists have been invited to build cottages in the neighbourhood, on very liberal terms; and as they can have their property leased on advantageous terms, we should imagine few will hesitate to build upon such conditions.

The applications for Letters Patent include—Mr. Thomas White, Prospect-terrace, Leeds, for improved machinery for uniting the soles and uppers of boots, shoes, and similar coverings for the feet, applicable also for uniting hose-pipes, harness, mill-straps, and other like purposes; Mr. William Drake, Sheffield, for improvements in the manufacture of iron; Mr. Joseph Bedford, Radcliffe, for improvements in locks or similar fastenings; Mr. W. Whiteley, Lockwood, for improvements in machinery or apparatus for tentering or stretching woolens and other fabrics; Mr. Wm. Anderson, Checkendon, for machinery for preparing, spinning, and doubling cotton, worsted, silk, and other fibrous materials.

REPORT FROM MONMOUTH AND SOUTH WALES.

FEB. 18.—Vitality is evinced in every branch of the Iron Trade, and the works in all parts of the district are in full employ. The reduction in the Bank rate of discount has, as might be naturally expected, had a favourable effect on the iron market, and, in fact, on all branches of trade. Speculation was the great cause of the rate going up to 8 per cent., and it is to be hoped that the restrictive measures of the Bank directors will put an end to that kind of trading for the future at least, except so far as is legitimate. It is a gratifying fact to record that there has been a complete absence of speculation in connection with the Welsh iron trade, and, therefore, the rapid and sudden changes on the Money Market have had but a slight effect on prices. The orders are coming in as well as might be expected at present, taking into consideration the time of the year, and there is no doubt entertained that buyers will, as usual, have large specifications to place out in the spring. Some buyers, it appears, have an idea that quotations are likely to recede before long, and, in consequence, they are holding back their requirements as long as possible. As far as South Wales is concerned, there is no probability of this being the case, for the makers are, as a rule, well placed with specifications, not only for a few weeks, but for months to come. What strengthens the opinion that quotations will hold their ground is the scarcity of hands, and the unsettled state of the puddlers, ballers, &c., as to the rise in wages to be received. Notices have been posted at nearly all the works, to the effect that another advance in wages will be given this month, and it is to be hoped that the same will be accepted without demur on the part of the men, and that no more will be heard of the threatened turn-outs and strikes.

The coalmasters have their hands full of business, and there is no lack of demand for both house and steam coal. The market is decidedly in favour of sellers, and the current quotations are obtained without difficulty, provided the coal is delivered within anything like reasonable time. Coke is in active request, the demand being principally from the Staffordshire works. The Blaenau dispute has not yet ended, and proceedings have been commenced against Messrs. Levick and Simpson, for alleged infringement of the Truck Act. The actions are likely to be tried at the next assizes.

The Monmouthshire Wagon Company half-yearly meeting was held on Wednesday; Mr. Crawshaw Bailey, M.P., in the chair. The report showed that the operations of the company had been unusually successful during the half-year, and a dividend at the rate of 8 per cent. per annum, was unanimously declared, against 7 1/2 per cent. for the previous half-year.

At the Bristol Bankruptcy Court, on Monday, the last examination and discharge sitting was held in re J. Evans, Aberdare, forge manager. Mr. H. Brittan, jun., explained that it was a case in *forma pauperis*, and it was adjourned on the last occasion in consequence of no balance-sheet having been filed. The balance-sheet had now been filed, and the official assignee was satisfied that there had been a full disclosure of the bankrupt's estate. The bankrupt then passed his last examination, and received his order of discharge.

The Tredegar section of the Merthyr, Tredegar, and Aberavenny Railway has been completed, and the line will be opened for both passenger and mineral traffic in a few days. This is one of the many short lines which is likely to materially promote the development of the iron and coal districts of Monmouthshire and Glamorganshire.

The Swansea Herald states that the Llanelly Tin-works have not been so well employed since the outbreak of the American war as at present. During the last month the wages at the Morfa Tin-works for all the boys in the wash-house, the cold-rollers, blacksmiths, &c., have been advanced 10 to 20 per cent., and the girls are in expectation of a similar rise. Unusual activity is to be witnessed at the Cambrian Lead-works, and a large quantity (700 tons) is being turned out weekly.

FRIGHTFUL BOILER EXPLOSION AT ABERAMAN WORKS—NINE LIVES LOST, AND GREAT DESTRUCTION OF PROPERTY.—A fearful accident occurred on Wednesday afternoon, at the Aberaman Ironworks, near Aberdare. The works are the property of Mr. Crawshaw Bailey, M.P., the wealthy ironmaster of Nant-y-Glo and Beaufort, and they are situated at the mouth of the Cwmaman Valley, about a mile from the rising town of Aberdare. The works consist of three blast-furnaces, puddling-furnaces, &c., and it is one of the oldest iron-making establishments in the locality, and hitherto remarkably free from accidents. Everything went on as usual until Wednesday afternoon, when suddenly a tremendous report was heard, and in an instant the whole of the blast engine-house and the boiler shed were enveloped in steam, and rising in the midst of it were the forms of two huge boilers, which were carried away with a velocity terrible to witness. A flood of boiling water streamed from the boilers on the poor men who happened to be near, and one of the ponderous cylinders alighted on the iron roof of the puddling-furnaces, and crushed it as if it were made of waste paper. The ends of each boiler were blown out, and showers of broken metal and stones were hurled in all directions by the force of the explosion. The boilers were blown into the air at least 60 or 70 feet high, and in their rise they knocked the end of the engine-house, a massive building of stone, four story high, and the roof being deprived of half its support, gave way, and fell with destructive force upon the engine below. The scene to be witnessed was heartrending in the extreme, and from the latest report, it appears no less than nine lives were lost, and eleven or twelve injured. The bodies in several instances were frightfully burnt and mutilated, and amongst the killed is the engine driver, and a son of Mr. Nant-y-Glo, the manager, was seriously injured. As to the

not yet reaped their reward, and when the prospects of the mine led them to estimate still he firmly believed in the ultimate success—and great success—of the company.

the same time, looking at the difficulties which had unexpectedly arisen in the past, and being more or less already surmounted, he was prepared to expect even more formidable difficulties in the future; yet, with the assistance of the additional capital, he felt convinced that satisfactory results would accrue to the shareholders.

LITERARY NOTICES.

This week has been completed and delivered to the subscribers one of the most costly, beautiful, and elaborate illustrations of Art ever yet chromo-lithographically executed in this country. There is no presumption in claiming for it the distinguishing characteristic of "great" in artistic reference, finish, style, and size, it unquestionably merits the appellation, and no one of cultivated taste will be found to cavil with the position or titular dignity in this instance. It bears the literary title of "MASTERPIECES OF INDUSTRIAL ART AND SCULPTURE," is published by Messrs. DAY and SON, the well known lithographers; and dedicated to Her Most Gracious Majesty, by the author, Mr. J. B. WARRING, Fellow of the Royal Institute of British Architects. No doubt can exist as to what the indicating influence of a publication of this nature will be on the manufacturing taste of the day: for, elevating and useful, in itself a school of design, it cannot be otherwise than suggestive of a still more extensive and varied range of artistic excellence; while, on the other hand, the selections having been made carefully, and with judgment well matured, from our International Exhibition of 1862, this descriptive record, thus dignified, will valuably, in a business sense, perpetuate the eminent character of those English and foreign houses from which the originals issued. Of the three huge volumes, their preface is richly and elegantly bound in morocco and gold, it would be vain and useless task to attempt a general description; and they could only be lauded in that form as the first of their class; but to treat of them in a manner materially servicable to the manufacturer, commerce, and trade of the day, they must be viewed and discussed elementally. We shall, therefore, begin with the beginning, exercising the privilege of according from the record of the first volume, precedence to our home manufacturers and artists, and thence giving place in detail to the works of the foreign exhibitors, from whose equalization of design so much has been learned—a fact cordially, and in true English spirit, acknowledged.

Glancing at the contents of the work *en masse*, there are to be found in it, besides descriptive letter-press in French and English, 300 plates, full page, and of the highest finish, containing 1000 subjects; and here the estimate becomes intensely interesting, it being computed that were an artist to undertake to produce the 300 plates in chromo-lithography the task would occupy him 42 years, and the solution printing of the plates, with their numerous colours, would take a further, at the usual working time per day, 104 years to accomplish. About 3000 lithographic stones have been used, and 40 tons of paper of the finest quality consumed, in the completion of this stupendous work; yet such has been the vast muster of genius, skill and energy, brought by those eminent publishers to bear upon it, that its production has been achieved in an incredibly short space of time—not much in excess of one year.

This is a feat in the chromo-lithographic art of which they may legitimately boast: nor is it one unworthy of the highest estimation of the whole scientific world. And from this point of view, it is not only the work of a great artist, but of a great engineer. The author, Mr. J. B. WARRING, acknowledged the coadjutancy of the following gentlemen:—Mr. STEPHEN THOMPSON, who, "under very difficult circumstances," took the photographs for the London Photographic and Stereoscopic Company; Mr. W. R. TAYLOR, the superintendent of the process of colouring, the selector of the artists employed, and who not only executed several of the chromo-lithographs himself, but supervised the passing of the whole through the press; Mr. ARTHUR WATSON, well known in the artistic sphere, who executed the plates, "illustrative of textile and surface decoration;" Mr. G. MACDONALD, distinguished in the lithographing of the sculpture plates; and Mr. REYNOLD DE LAMARTINIÈRE, who acted as translator, a by no means light labour, where the utmost accuracy in dealing with the technicalities of a scientific subject had to be studied.

We now pass on to the summary of Vol. I., according to the system already laid down. Plate No. 20 is the first that exhibits a specimen of English "metal work," by Messrs. J. HARDMAN and Co., of Birmingham and Mr. KATZ, London. This latter gentleman has been for a length of time extensively known as a fabricator of ecclesiastical plate, while Messrs. HARDMAN and Co.'s reputation for work of a similar character, as well as for domestic use, has been long thoroughly established, and their lamps, inkstands, candlesticks, and a tea service in the Medieval style, have been greatly admired. Mr. KATZ's precious metal work obtained a medal for "excellence of manufacture and general merit at the late Exhibition. This representation is beautifully wrought, and exists, for those who executed the originals, a very laudable advertisement.

Plate 39.—Sculpture in iron, the work of T. WILKINSON and SON, STEER and WARRING, of Sheffield, and the latter by Mr. G. PRICE, of Wolverhampton, and the Messrs. CHURCH. The articles here illustrated exhibit great beauty of design, are highly ornamental, and may be said to actually glitter on the page.

Plate 48.—A grate and fire-dogs, in the Medieval style, by Messrs. JEAKE and Co., London. This construction, although the type of what was when wood fires only were in fashion, is ingeniously adapted to the consumption of coal. "With the exception of the brasswork and ornament, the whole of the grate is of wrought iron, presenting a very massive appearance, and very suitable to the hall of a large mansion." In 1851, Mr. W. JEAKE received a medal for stove grates, which were specially approved, and at our late Exhibition the firm was voted another "for excellence of manufacture in kitchen ranges and other grates." This design is admirably treated.

Plate 56.—Here we have fire-grates again, by Messrs. FRETHERN and Co., London. No grates at the Exhibition of 1862 were more justly admired and sought after for excellence of design and perfection in finish than those of this firm, when it then obtained a medal, thus sustaining the reputation which was recorded a like mark of merit, one with special approbation, in 1851. Like the preceding illustration in our notice, this leaves the eye nothing to seek for.

Plate 57.—Presentation sword. By WIDDOWSON and VEALE, and HANCOCK, London. As specimen representations of swords of honour these are very interesting. The late Sir JAMES OUTRAM was the recipient of two out of the three featured by Messrs. WIDDOWSON and VEALE, one from the inhabitants of Bombay, the other from the Lord Mayor and Corporation of London. The sword presented to the City after the Indian Mutiny, Major F. E. SMITH, H.M. 37th Infantry, was presented with the last from the before-mentioned manufacturers, for indomitable bravery in 1862, by the inhabitants of the Cape of Good Hope; and that, the work of Mr. HANCOCK, of Bond-street, was voted to H.R.H. the Duke of CAMBRIDGE, together with the freedom of the City of London, by the Lord Mayor and the Corporation, in 1857, in testimony of their high estimation of his character and services. These evidences of public esteem could not have been better bestowed. Mr. REYNOLD DE LAMARTINIÈRE, of London, also exhibited ornamental swords in 1862, which attracted considerable attention. One of the descriptions given—"The cut guards of the former were of considerable merit, and one of his blades was as pliable as the best Toledo." The weapons are minutely and brilliantly lithographed.

Plate 64.—A Chimney-piece, by Messrs. TROLOPE and SON, London. This eminent and long-established metropolitan house obtained medals at the London International Exhibition of 1861, at that of Paris in 1859, and again at the last in this country in 1862, "for their carved and painted decorations, and cabinet furniture, evincing great excellence of design and workmanship." This chimney-piece, intended for a library, has a most imposing appearance, and was designed in the Lombardo-Gothic style, by R. BEAVIS, the whole of the modelling owing to his perfect and accurate workmanship to Mr. MARK ROGERS, foreman of the carvers in the Messrs. TROLOPE's establishment. Mr. W. FIELD's ability being also strikingly represented by the carved stone fire-place and marble columns. This construction is of the first order, and "is surrounded with wood panels, carved with foliage, and with bas-reliefs of the greatest beauty." There is, as we have breathed, around it a poetic spirit, full meet for literary study and use. One very suitable characteristic has been passed over, it is a clock by DENT, inset in the centre of the mantel, on each side of which are reposeful figures of Night and Morning. Who can look on this illustration and not feel that the intelligence of man can infuse its vitalisation into the most organic matter?

Plate 66.—Wrought-iron grilles, by Messrs. BENHAM and SON, London. A prize medal was, by the International Jury, given to Messrs. BENHAM's work, "for its ornament and utility." Mr. NORMAN BARNES, designer of the grilles, has hammered iron grilles, the main strength of which lies in the framework, the ornamental construction being subsidiary and riveted to the frame in contradistinction to the use of screws, which do not act sufficiently in the composite degree, and are liable to snap, thus disorganising the whole. There are other factual features worthy of great consideration by the trade, and will be referred to with great practical benefit. In this plate a growing industry is effectively represented.

Plate 68.—Group of glass, by Messrs. W. P. and G. PHILLIPS, London. Prize awarded by the International Jury "for various specimens of general excellence, including cut glass and Venetian designs." The manufacturers of these goods, designed by the above were Messrs. J. WREN and SON, of Stourbridge. There is a delicacy of conception in the whole design of this group seldom equalled, and their future view with such excellence. The portrayal equals both in merit.

Plate 72.—The Finding of Moses, a marble group, by B. E. SPENCE. This is a very dignified, graceful, and vivid rendering of the scriptural event, by one of our national sculptors. The figures are larger than life size, and are in features and costume markedly characteristic. The group is now the property of Mr. J. NATION, of Leighton Hall, but the sculptor is self-expatiated, and resides at present in Italy. Mr. BENJAMIN EVANS SPENCE was born at Liverpool, in the year 1827. He has executed many works, but his most popular was that for the late Prince Consort, "Highland Mary," which is now "at home" in Balmoral. Nature that so tenderly speaks in the statuary is no less a gentle utterance in the chromo-lithograph before us.

Plate 76.—Group of engraved glass, by Messrs. DONSON and PEARCE, London. "The engraving exhibited by this firm is of the highest order. Great labour has been bestowed upon the designs, which, as regards careful elaboration of the manipulative processes, are of artistic merit, especially a tazza and a pilgrim bottle, of Arabesque engraving." This written judgment accompanied the prize medal awarded to Messrs. DONSON and PEARCE. The record now presented describes it as an utter impossibility to do justice, in a limited space, to the engraved glass of those gentlemen, among which, at the Exhibition of 1862, the Monks' tazza alone like a gem. The illustration of the group 78 is no less precious in its way.

Plate 82.—A silver table and mirror by Messrs. ELKINGTON and Co., London. In the nave of the Exhibition of 1862 the oxidized and gilt table and mirror of Messrs. ELKINGTON attracted the admiration of all the admirers of the fine arts, and never did the science of illustration more chastely impress its worth upon the mind than in the delineation of that beautiful work now referred to. There is a legend attached to it, with other circumstances holding relation to the highly appreciative taste of His Royal Highness the late PRINCE ALBERT, which want of space obliges us to postpone.

(To be continued.)

THE PRESENT CONDITION OF GEOLOGICAL SCIENCE.—An interesting and thoughtfully written pamphlet, entitled "Remarks upon the Present Condition of Geological Science," by Mr. G. E. ROBERTS, has just been issued through Mr. Van Voorst, of Paternoster-row. After carefully considering the various portions of his subject, he observes that the broad features of geological history, as at present accepted, are, no doubt, approximately true; but this is the utmost we are justified in believing. The many elements in the scheme, of which we know but little, added to the data which are missing, makes a tolerably good reason why we should decline to pin our faith unalterably to any scheme of geological history, or to any hypotheses derivable from the facts at present ascertained. For what is the actual value of our harvest? We have scratched the surface here and there, and described a rock miles in depth, and hundreds of miles in area, from a dozen hand specimens: we have galled rocks aso because we have not succeeded in finding organic remains in a part of

them which probably represents less than a millionth of their bulk: and we have laid down the generic value and numerical proportion of life in ancient seas from a chance discovery of some local spot in their area, favourable, or the reverse, for the preservation and continuance of life. All broad reasoning drawn from such work will have to be abandoned. Such facts should be carefully garnered into the barns of the science; they may serve hereafter to decorate the edifice of geology; but we shall find better stores than these for the building of it. Let us be patient for awhile, and satisfy ourselves with the accumulation of facts.

A WEEK'S WANDERINGS IN CORNWALL AND DEVON.—An interesting little volume under this title has recently been issued (through Mr. Birmingham, of Bristol) by Mr. T. H. MILLS, which will doubtless afford a pleasant means of passing an idle hour to anyone visiting the same locality. Mr. Mills has carefully collected all he deemed calculated to excite a laugh, and by this means, in combination with his interminable power of punning, he has produced a book that is likely to be well read. There are those who prefer "an execrable pun" to satire that "wounds with a touch that scarcely felt or seen," and to those we do not hesitate to say that Mr. Mills's book will be a most welcome offering.

OUR INDIAN EMPIRE.—THE LAND QUESTION.—A pamphlet, containing the reprint of a valuable series of articles on the Land Question, from the *Times of India*, has just been issued. It is justly remarked that it is by far the most important question that can engage the attention of Indian statesmen of the present day. Upon its right determination depends, so far as man can see, the future prosperity of unnumbered millions of our race. As we are wise or foolish shall we devolve upon the future of India an inheritance of peace and prosperity or of tumult and misery. The whole question is very ably argued in the interest of the ryots, and we do not think that anyone at all acquainted with the manners and habits of the various classes, and free from prejudice towards either, can doubt that it is to the protection and elevation of the ryots, who are really almost the sole representatives in India of what elsewhere would be the better portion of the working classes, that prosperity and contentment must be looked forward to. A very short extract will enable the general nature of the argument to be understood. Instead of recasting our land settlement upon the Bengal model, the wisest investment a nation ever yet made would be for the Government of India to buy up the Zemindar rights of Bengal, paying for the amount in stock. By defrauding the urban population of India, we have conferred an income of many millions a-year upon the Zemindars of that province. The Zemindar rights of that province must be worth 10,000,000, to 12,000,000 a-year, representing a capitalised value of 200,000,000, to 240,000,000, sterling. This property was vested in the State as trustee for the whole people of India, whom the permanent settlement has defrauded by so much, without improving the cultivation or circumstances of the masses of Bengal in the least. On the contrary, the condition of the masses under that settlement is worse than in any other part of India.

We have begged the ryot that we might raise up a race of dissipated, selfish, rack-renting landlords upon the soil. The people have been slowly emerging of late years from this deep misery, when the High Court of Calcutta, at the bidding of the Indigo planters of the present day, deliberately decrees them back into destitution, by ruling that the Zemindar may henceforth increase his rents upon them at will. Never was a country in circumstances of such peril from the combined effects of ignorance and selfishness. We are commanded to repeat the monstrous folly of this settlement everywhere; and to destroy the whole yeoman class of India, that we may satisfy the doctrinaire clamours of men wholly ignorant of our condition. They have been extending the permanent settlement of India, that settlement ought to be subverted in Bengal at any cost. The only effect of that settlement has been to burden the rest of India with double or treble the weight of taxation the Bengalee bears, to make up for the exemption unjustly allowed the Zemindar under it.

The proposal to make a permanent settlement of the land revenue throughout the country we believe to be fatally unsound, with whatever precautions it may be introduced. The tendency of every such settlement, in the present condition of the people, must be, we fear, to destroy the ryot, and thrust the land into the hands of a few sower, who would have class of landlords. You cannot convert the sowers of India into a great aristocracy of improving landlords, that fond dream of the permanent settlement theory. A vast revolution must take place in the thoughts and habits of the people before we can hope to see the money lender anything but an ignorant and exacting landlord; while the tendency of every permanent settlement is to throw the land into his hands. Had a permanent settlement been introduced into the Presidency five or twenty years ago, it would have stereotyped the poverty of our ryots for ever. 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Persons inclined to buy are invited to appear at the appointed hour, in the Judgment Chamber of the undersigned Court of Justice.

More detailed descriptions, and inventory of the foundry, the deeds and contracts, de-appertaining to it, and the stipulations of sale, may be known in the clerk's room of the undersigned Court of Justice, and of the trustee in bankrupt's estate of the Benelming-Lingen Society, Curator, Advocate, Notary, Senator ZUSANDE, in Lingen; and may also be got by copy, if the costs are repaid.

The dirigent of the foundry, Mr. WELCKER, at Wietsmarschen, near Lingen, is inclined to give nearer account on the business of the work.

Royal Court of Justice, Section II.,
Lingen, on the 12th day of November, 1863, SUDENDORF,

THE GLAMORGAN IRON ORE COMPANY (LIMITED).
Capital £40,000, in 8000 shares of £5 each.
Deposit, 10s. on application, and 20s. on allotment.
Thirty days' notice of calls, which will not exceed £1 per share.
Registered under the Companies Act. Each member's liabilities limited to the amount of his subscription.
DIRECTORS.
JOSEPH ATWELL, Esq., 13, Campden Hill Villas, Kensington. (Wales.)
JAMES BANKS, Esq., 32, Bucklersbury, and Broxbourne.
D. HOUGHTON, Esq., Newhall-street, Birmingham; and Ffordrwm, Neath, South Wales.
WILLIAM HUTCHINSON, Esq., Carrick on Shannon.
HENRY PHILLIPS, Esq., 10, Buckingham-gate, St. James's Park.
WILLIAM GIBSON, Esq., 40, Broad-street-buildings.
BANKERS—The Alliance Bank of London and Liverpool (Limited), Lothbury.
Secretary (pro tem.)—Mr. Fullwood.
TEMPORARY OFFICES,—41, LOMBARD STREET, LONDON.

This company has been formed for the purpose of purchasing a long lease of and working a very valuable deposit of argillaceous iron ore.
Full prospectuses and forms of application for shares can be obtained from the secretary, at the offices of the company, where also samples of the iron ore can be seen.

THE GLAMORGAN IRON ORE COMPANY (LIMITED).
Notice is hereby given, that the directors of the above company have entered into arrangements for the construction forthwith of the necessary works for bringing the ore to surface, and until their completion, the contractor (a thoroughly responsible person) has guaranteed to the shareholders interest at the rate of 6 per cent. per annum.
By order.

THE GLAMORGAN IRON ORE COMPANY (LIMITED).
Notice is hereby given, that in consequence of the pressure of applications for shares in the company, the directors will meet to consider them, and apportion the various allotments, on Tuesday, March 8. All applications for shares must, therefore, be sent to the brokers or secretary, on or before Saturday, March 5, 1864.
Temporary Offices, 41, Lombard-street, London. By order.

QUELLYN SLATE QUARRY COMPANY (LIMITED).
WORKS, CARNARVON, NORTH WALES.
Capital £20,000, in 4000 shares of £5 each. Deposit, 10s. per share on application, and 10s. on allotment.
Calls, £1 per share, at not less intervals than three months.
Incorporated under the Joint-Stock Companies Act of 1862, limiting the liability of each shareholder to the amount of the shares allotted to him.
First issue, £12,000. No less number than five shares will be allotted.
DIRECTORS.
Mr. WILLIAM GARFORTH, Halifax.
Mr. ALFRED NICHOLLS, Halifax.
Mr. JAMES BAIRNATH, Halifax.
Mr. SAMUEL WIMPENY, Holmfirth.
BANKERS—The Halifax Joint-Stock Banking Company.
Solicitor—John Edwards Hill, Esq., Halifax.
MANAGER—Mr. John Lloyd, Surveyor, Carnarvon.
SECRETARY—Mr. John Clay, Accountant, Halifax.
OFFICE,—20, COW GREEN, HALIFAX.

This company is formed for working a slate quarry about eight miles from Carnarvon. The quarry has been opened, and proved to contain slate of a very superior quality. The lease is for 30 years, renewable for 30 years. More than one-third of the shares are already applied for, therefore an early application is necessary.
Samples of the slate from the quarry may be seen at the office, and also plans and sections of the quarry.
Prospectuses and forms of application for shares may be had on application to the secretary.

THE NEW COMBAMARTIN SILVER-LEAD MINING COMPANY (LIMITED).
Registered under the Companies Act, 1862, whereby the liability of the shareholders is strictly limited to the amount of their respective shares, and Table A in the Act adopted as the rules and regulations of the company.
Capital, £10,000, in 2000 shares of £5 each.
5s. to be paid on application, and 10s. on allotment.
No further call to be made until the expiration of a year; and then no instalment to exceed 5s. per share, nor at intervals of less than three months.
DIRECTORS.
BASSET SMITH, Esq., Elm-court, Temple, Deputy-Chairman of the Tewkesbury and Malvern Railway.
JAMES BANKS, Esq., Broxbourne, Herts, Director of the Tamar, Kitt Hill, and Cal-Major-General SHORTEDE, the Rowans, Lee-road, Blackheath.
MOFFATT C. W. HORNE, Esq., Liffcombe, and Gullford-street, London, W.C.
WILLIAM YOUNG, Esq., Bath House, Inatow, Devon, J. P.
JOHN A. PARRY, Esq., Holland House, Barnstaple.
PHILIP STONEHAM, Esq., Liffcombe, F.R.C.S.
BANKERS—London: The City Bank, Threadneedle-street.
Barnstaple: West of England and South Wales District Bank.
Solicitors—Messrs. Pritchard and Collette, 57, Lincoln's Inn-fields, W.C.
Brokers—Mr. Edward Cooke, 75, Old Broad-street, E.C.
Secretary—Mr. George Frederick Goodman.
OFFICES,—7, GEORGE YARD, LOMBARD STREET, E.C.

PROSPECTUS.
The object of this company is to explore and work a very valuable piece of mineral ground situated in the silver-lead district of Combmartin, in the north of Devon, which in ancient and modern times produced so much wealth, the grant of which valuable ground this company have succeeded in obtaining after much negotiation.
The set comprises the estates of West Chacombe and Lelcester, and is granted for a term of 21 years, at 1-15th royalty. It extends over 150 acres of mineral ground, about three-quarters of a mile long on the course of the lodes, and is adjacent to the celebrated Old Combmartin Mines, which paid such handsome dividends to its shareholders.
There are nine lodes opened in the set, the properties and value of which are clearly stated in the annexed reports; and all that is necessary to make this a valuable and dividend-paying property is careful management and economic outlay. The series of rocks, of which the New Combmartin set forms a part, is described by geologists to be of similar mineral formation to the productive mines of Germany and Brittany.
Mr. Evan Hopkins, F.G.S., considers some of the features affecting this property to resemble the Marquitta and St. Ana Silver Mines, and believes both the main lodes of Old Combmartin Mine continue through this set. He likes the angular appearances of these lodes, as well as the dislocations and contortions of the rock they intersect, and believes they will produce large masses of argentiferous lead ores in this property, and sustain the character of the Combmartin district.
Mr. Nicholas Ennor regards the rock of Combmartin eminently adapted for producing silver-lead ore, which may be readily wrought by extensive adit levels on the lodes.
Mr. Nicholas Whitley has published in his "Geological Transactions of Cornwall" his opinion that Combmartin district corresponds geologically and mineralogically to that of Liskeard, where rich silver-lead mines prevail.
A high opinion of the richness for silver and ore-producing capabilities of Combmartin is entertained at the Government School of Mines.
The late Capt. Curlew, for many years agent to Messrs. Williams, endeavoured to obtain, while others offered a large sum for the lease of this property, of which he held the highest opinion, and in which he was supported by other very eminent mining authorities.
The numerous flookan lodes and cross-courses in this set are masterly, well-defined and composed, having various angles of bearing—the former being N.W., N.E., and E. and W., while the latter run N. and S. The matrices of the ore are second to none, consisting of flookan, conglantrian spar, abundance of carbonate of lime, rich copper carbonate of iron, mundle, blende, oxide of iron, quartz, chlorite, &c. The probabilities of profitable lodes of ore being found at many of the very numerous junctions in this property are great.
Mining works of ancient date exist in New Combmartin set, which collaterally greatly add to its value, inasmuch as the enormous discoveries of ore in Old Combmartin Mines in 1835 entirely arose from a resumption and pursuance, at a slightly deeper point, of precisely similar bygone works.
The almost perpendicular cliff which forms the north boundary of the set is 50 fms. high, for three-quarters of a mile long, with the lodes cropping out therein, on the course of which adit levels can be immediately begun, and which can be met by deep levels on the same lodes from the south, so that the result of these natural favourable features, may be moderately estimated at a saving of £10,000, and the delay of many years is avoided.
There is an excellent stream of water for dressing and other purposes, and the carriage of materials, and freight of ore, &c., cannot be less anywhere than in this mine.
The ore already raised from this set is of first-rate quality, and the reports hereto appended show that, under judicious management, a most profitable mine at a small outlay will be the result. Indeed it is questionable if more than the allotment deposit will be needed.
£17 6s. per ton has been offered for the ore by Messrs. Sims and Williams, Llanelli. The present proprietors of this valuable property have agreed to accept out of the proposed capital the sum of £4000 in paid-up shares in the capital of the company.
The works will be commenced when one-half of the shares offered to the public are subscribed for; and if that amount is not subscribed for by the 2d of April, 1864, the deposits will be returned in full.
Prospectuses, together with plans of the property, detailed reports from Capt. John Treweek, Wm. Trelease, John Blamey, William Newton, Alfred S. Kingston, and William Phillips, and forms of application for shares, can be obtained, and specimens of the ore seen, on application to the secretary, at the offices of the company, and at Mr. J. D. Youss's Foundry, Barnstaple.

BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, No. 2, WINCHESTER BUILDINGS, GREAT WINCHESTER STREET, LONDON, E.C.
Messrs. FULLER AND CO. continue to BUY and SELL EVERY DESCRIPTION OF SHARES IN BANKS, CANALS, MINES, RAILWAYS, and GOVERNMENT STOCK, either for money or account. Stock Exchange business effected upon the usual commission.
Capitalists who seek safe and profitable investment will find that mines afford a wider range for profit than any other public security, and pay dividends quarterly from 12½ to 20 per cent. per annum. Progressive mines frequently advance hundreds per cent. in value.
Messrs. FULLER AND CO. having channels for the disposal of shares comprised in the miscellaneous list, invite the holders thereof to communicate with them; and having had upwards of 20 years' experience in the mining market, are prepared to advise as to the purchase of shares for an early advance in price, and for becoming a safe and remunerative investment.
Telegraphic messages promptly attended to, and every information supplied, either personally or by letter. Office hours, from Ten to Four o'clock.
Bankers: The Metropolitan and Provincial, Cornhill.

MR. GEORGE HENWOOD, MINING ENGINEER,
LOCHHEAD HOUSE, LOCHWINNOCH, SCOTLAND, OFFERS his SERVICES and ADVICE on mines situated in any part of England, Scotland, Wales, Ireland, Isle of Man, &c. Mr. Henwood's extensive experience in his peculiar department of mining science is well known, and will be exerted to the utmost for the benefit of his clients.

NICHOLLS, WILLIAMS, AND CO., ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST AND NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the manufacture of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON AND HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. RAILWAY WORK OF EVERY DESCRIPTION.
ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, WILLIAMS, AND CO. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.
Messrs. NICHOLLS, WILLIAMS, AND CO. have always a LARGE STOCK OF SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

MESSRS. W. DERRY AND CO., MINING MATERIAL MERCHANTS, ST. AUUSTELL, respectfully inform the mining public that they have constantly ON SALE EVERY DESCRIPTION OF MINING PLANT, IN STEAM ENGINES, pitwork, and dressing appliances, which they are prepared to offer on very advantageous terms, and such as will especially commend themselves to the projector of new undertakings.—Applicants to be addressed as above, or to the engineer of the company, Mr. W. H. GRAY, St. Austell.
Dated St. Austell, August 12, 1863.

WILLIAM MATHEWS, ENGINEER, TAVISTOCK,
has FOR SALE:—ONE 30 in. CORNISH PUMP ENGINE, with BOILER 9 tons; ONE 14 in. HORIZONTAL WHIM ENGINE and cage, with BOILER 4½ tons; TWO 10 horse PORTABLE ENGINES, for winding or pumping; ONE CORNISH CRUSHER; ONE 30 ft. diameter WATER WHEEL, 9 ft. breast, iron axle, sockets and rings; 60 fms. of 3 in. flat-rods, with pulleys.

RAILWAY CARRIAGE COMPANY (LIMITED).
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.
Passenger carriages and wagons built, either for cash or for payment over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

THE BIRMINGHAM WAGON COMPANY (LIMITED)
is PREPARED TO SUPPLY RAILWAY WAGONS OF EVERY DESCRIPTION, capable of carrying 6, 8, or 10 tons, at annual rentals, or for purchase on deferred payments, on advantageous terms.
EDMUND FOWLER, Sec.
OFFICES,—3, NEWHALL STREET, BIRMINGHAM.

SHORTIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING THE STRENGTH OF STEEL WITH THE MALLEABILITY OF COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTIDGE, HOWELL, AND CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY AND CO., 12, Haymarket, London.

CORNISH CRUCIBLE AND BLACK-LEAD POT MAKER,
JOHN JULEFF, FORD STREET, and PEDDAN-DREA, REDRUTH.

COAL CUTTING MACHINERY.
THE WEST ARDSEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY TO MAKE CONTRACTS FOR THE CONSTRUCTION AND USE OF THEIR MACHINES. The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have been most satisfactory, their use being found to CHEAPEN THE COST OF IMPROVE THE AVERAGE SIZE OF THE COAL, TO LIGHTEN THE LABOUR, and also TO MODIFY THE SANITARY CONDITION OF THE MINE. All communications to be made to Messrs. FIRTH, DONISTHORPE, and BOWEN, No. 8, Britannia-street, Leeds.

NOTICE.—THE WEST ARDSEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT IS MADE.

Adopted by the Governments of Great Britain, Spain, Denmark, Russia, Brazil, East and West Indies.
EASTON'S PATENT BOILER FLUID,
FOR REMOVING AND PREVENTING INCORUSTATION IN STEAM BOILERS, LAND AND MARINE.
P. S. EASTON AND G. SPRINGFIELD,
Patentees and Sole Manufacturers,
37, 38, and 39, WAPPING WALL, LONDON, E.
Or of their Agents in the principal towns of Great Britain and the Colonies.

EDWARDS'S PATENT MINERAL ORE AND COAL WASHING MACHINE.—This is by far the MOST ECONOMICAL, as well as the MOST PERFECT MACHINE MADE. Each machine is capable of washing 25 to 50 tons per diem, according to quality.—Full particulars, testimonials, &c., may be obtained from E. EDWARDS, Esq., C.E., 1, York-buildings, Adelphi, where a working model may be seen.

IMPROVED APPLICATION OF WATER-POWER.
THE TURBINE.—MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for 12 years, with complete success, in MANUFACTURING their IMPROVED TURBINES, and can recommend them with confidence.
This machine is applicable to all practicable heights of fall and quantities of water, giving a much higher percentage of power than any other description of water-wheels. On low falls it has the additional advantage of not being affected by floods or high water, and it is particularly well adapted for any falls where the quantity of water is variable.
Further particulars on application; also, references to turbines now at work on a great variety of falls.

ASSAYS AND ANALYSES UNDERTAKEN AT MODERATE CHARGES, by Mr. ARTHUR EVANS, LECTURER ON CHEMISTRY, NORMAL COLLEGE, SWANSEA.—Facts to be directed Mr. A. EVANS, 12, High-street, Swansea.

MESSRS. C. SCHIELE AND CO., ENGINEERS,
INVENTORS, PATENTEES, AND SOLE MANUFACTURERS OF SCHIELE'S PATENT TURBINE WATER WHEELS OF 1863.
SCHIELE'S PATENT SILENT FANS OF 1863.
SCHIELE'S PATENT CENTRIFUGAL PUMPS OF 1863.
SCHIELE'S PATENT BLAST AND VENTILATING ENGINES OF 1863.
SCHIELE'S PATENT TURBINE STEAM ENGINES OF 1863.
SCHIELE'S PATENT MARINE VENTILATORS OF 1863.
SCHIELE'S PATENT MINE VENTILATORS OF 1863.
SCHIELE'S PATENT EXHAUSTERS OF 1863.
SCHIELE'S PATENT COMPOUND FANS OF 1863.
SCHIELE'S PATENT COMPOUND BLAST ENGINES OF 1863.
SCHIELE'S PATENT GOVERNOR OF 1863.
SCHIELE'S PATENT WAVE POWER MACHINERY OF 1860.
SCHIELE'S PATENT CRUSHING MILLS OF 1860.
WORKS,—CHORLTON WORKS, COULAND STREET.
OFFICES,—2, CLARENCE BUILDINGS, BOOTH STREET, MANCHESTER.
ALL MACHINERY ERECTED BY US GUARANTEED.

The following is copied from the "Manchester Examiner and Times," Oct. 21, 1863:—
SCHIELE'S WATER TURBINE.—A remarkably ingenious improvement has been effected by Messrs. C. Schiele and Co., of this city, in the invention of the water turbine, or wheel. Wherever a stationary engine is fixed a water turbine may now take its place, effecting an entire saving of coal and engineering, besides taking away all risk from fire or explosions. They are so compact that one, measuring 4 in. by 3 in. deep, will work a large organ, by being fixed in the ordinary way to the water-pipe. The water pressure during the day in Manchester, by the Corporation Waterworks, is equal to 47 lbs. to the square inch, and at night it is 70 lbs. to the square inch; here, then, is a motive-power applicable to many purposes to which it has never yet been applied. The power of the turbines varies from that of a boy to that of 1000 horses and upwards. From the peculiar construction of the turbines, also, it is impossible for them to become choked with leaves or sticks, as is the case with most other turbines. Several small ones are fixed, and are working machines of various sorts in Manchester, and the demand for them is so great that they bid fair to supplant the major portion of the stationary engines now in use, where a cheap supply of water can be had. They are applicable for domestic, commercial, and agricultural purposes, and may be placed in drawing, dining, breakfast rooms, or cellars; they are always ready for work, and may be set going or stopped at any moment by simply turning a tap. They will work printing presses, printing-machines, coffee mills, tobacco-cutting machines, saw, threshing machines, doists, and drive hydraulic presses. The size of the little machines, which may be carried in the hand, and the work they do, are in remarkable contrast, and it is only by seeing one at work that its real importance and value can be appreciated. Several of them may thus be seen by applying at the offices of Messrs. SCHIELE and Co., Clarence-buildings, Booth-street.
For other opinions of the press see "Manchester Guardian," Oct. 13, 1863; "Manchester Courier," Oct. 24, 1863; "Salford Weekly News," Oct. 24, 1863; "Preston Guardian," Oct. 24, 1863.

CREASE'S PATENT EXCAVATING MACHINERY,
FOR SUPERSEDING THE SLOW AND EXPENSIVE USE OF MANUAL LABOUR IN SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 fm. per diem, and to sink shafts at the rate of 2 fms. in three days.
Mr. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.
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BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last paid.
1200	Alderley Edge (cop.), Cheshire [L.]	10 0 0	—	—	18 10 0	1 0 0—Oct. 1863
1200	Bedford United (cop.), Tavistock	2 6 8	—	—	13 4 0	2 0 0—Jan. 1864
1200	Boscawell (tin), Devon [L.]	8 15 0	—	—	0 15 0	0 5 0—Dec. 1863
1200	Botalack (tin), Devon [L.]	2 6 8	—	—	469 10 0	7 0 0—Aug. 1863
5000	Brontford (lead), Cardigan [L.]	2 6 8	—	—	0 16 0	2 6 8—Jan. 1864
916	Cargill (silver-lead), Newlyn	15 7 0	—	—	0 0 0	1 5 0—Jan. 1863
2900	Clifford Amalgamated (cop.), Gwent	30 0 0	—	—	30 16 0	10 0 0—Feb. 1864
12000	Copper Mines of England	25 0 0	—	—	7 1/2 per cent.	—Half-yrly.
40000	Ditto (stock)	100 0 0	—	—	1 per cent.	—Half-yrly.
867	Edwin (lead), Cardiganshire [L.]	7 10 0	—	—	10 15 0	0 15 0—Jan. 1864
128	Gwynwith (lead), Cardiganshire	60 0 0	—	—	259 10 0	4 0 0—Nov. 1863
1024	Heaton (tin), Devon [L.]	1 0 0	—	—	891 10 0	0 10 0—Jan. 1864
358	Dolcoath (cop.), Camborne	128 17 6	—	—	748 10 0	0 0 0—Feb. 1864
12000	Drake Walls (tin), Calstock	2 1 0	—	—	0 18 0	0 1 0—May, 1863
512	East Basset (cop.), Redruth [S.E.]	29 10 0	—	—	117 0 0	2 0 0—Jan. 1864
6144	East Caradon (cop.), St. Cleer [S.E.]	2 14 0	—	—	9 2 0	0 19 0—Jan. 1864
320	East Darwen (lead), Cardiganshire	2 0 0	—	—	93 10 0	2 0 0—Feb. 1864
1200	East Pool (tin), Pool, Hlogan	24 5 0	—	—	350 0 0	5 0 0—Dec. 1863
1200	East Wheal Lovell (tin), Wendron	2 13 6	—	—	1 0 0	0 7 0—Jan. 1864
2000	Foxdale (lead), Isle of Man [L.]	2 0 0	—	—	0 2 0	0 1 0—Dec. 1863
8000	Frank Mills (lead), Christow	2 0 0	—	—	5 15 0	0 10 0—Nov. 1863
1796	Great Wheal Fortune (tin), Breage	18 4 0	—	—	2 17 0	0 5 0—Dec. 1863
5000	Great Wh. Vor (tin), Helston [S.E.]	40 0 0	—	—	2 17 0	0 5 0—Dec. 1863
1024	Herodfoot (id.), near Liskeard [S.E.]	8 10 0	—	—	28 0 0	1 15 0—Feb. 1864
400	Lisburne (lead), Cardiganshire, Wales	18 10 0	—	—	415 10 0	3 0 0—Dec. 1863
9000	Marke Valley (cop.), Cardigan	4 10 0	—	—	2 12 0	0 1 0—Jan. 1864
1200	Miners Mining Co. [L.] (id.), Wrexham	2 0 0	—	—	128 10 0	6 5 0—Nov. 1863
20000	Miners of Ireland (cop., lead, coal)	7 0 0	—	—	18 7 4	0 9 0—July, 1863
40000	Mynydd (iron ore) [L.] [S.E.]	2 10 0	—	—	5 0 0	1 0 0—Mar. 1862
250	Nanty Mines (lead), Montgomery	29 0 0	—	—	0 5 0	1 0 0—Dec. 1863
6000	New Birch Tor and Viller Cos. (tin)	1 6 0	—	—	0 5 0	0 5 0—Sept. 1863
5936	North Troskerby (cop.), St. Agnes	1 9 0	—	—	0 13 0	0 2 0—Feb. 1864
6409	Par Consols (cop.), St. Biazey [S.E.]	1 2 0	—	—	36 10 0	0 2 0—Mar. 1863
307	Parys Mines (cop.), Anglesey [L.]	60 0 0	—	—	82 10 0	0 10 0—Oct. 1863
1772	Pelberron (tin), St. Agnes	15 0 0	—	—	7 19 0	0 10 0—Nov. 1863
612	Pelberron (tin), St. Agnes	15 0 0	—	—	1 0 0	0 1 0—July, 1863
1132	Providence (tin), Uny Lelant [S.E.]	10 7 0	—	—	0 10 0	0 1 0—Jan. 1864
6000	Rosewall Hill and Ransom United	2 10 0	—	—	0 10 0	0 1 0—Jan. 1864
612	South Caradon (cop.), St. Cleer [S.E.]	1 5 0	—	—	426 10 0	0 6 0—Jan. 1864
612	South Wales (cop.), Redruth, Cornwall	8 0 0	—	—	74 10 0	1 0 0—May, 1863
498	S. Wh. Frances (cop.), Hlogan [S.E.]	18 10 0	—	—	370 13 6	1 0 0—Nov. 1863
840	St. Ives Consols (tin), St. Ives	8 0 0	—	—	489 10 0	1 0 0—Feb. 1864
6000	Tincort (cop., tin), Pool, Hlogan [S.E.]	9 0 0	—	—	13 18 0	0 10 0—Nov. 1863
6000	West Basset (cop.), Hlogan [S.E.]	1 10 0	—	—	24 18 0	0 5 0—Nov. 1863
3000	W. Chiverton (id.), Perranzabuloe [S.]	59 60 0	—	—	48 0 0	1 0 0—Jan. 1864
256	West Damsel (cop.), Gwennap	38 10 0	—	—	48 0 0	1 0 0—Jan. 1864
400	W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0	—	—	491 0 0	4 0 0—Feb. 1864
512	Wheal Basset (cop.), Hlogan [S.E.]	2 6 8	—	—	607 0 0	1 10 0—Feb. 1864
1000	Wheal Basset and Grylls (tin)	7 0 0	—	—	3 0 0	0 10 0—Oct. 1863
1024	Wheal Grylls (tin), Perranzabuloe	2 4 0	—	—	6 2 0	1 0 0—Sept. 1863
4285	Wheal Llan (tin), St. Agnes	6 4 0	—	—	1 8 0	0 5 0—Jan. 1864
1024	Wheal Llan (tin), St. Agnes	6 4 0	—	—	7 6 0	0 5 0—Jan. 1864
856	Wh. Margaret (tin), Uny Lel. [S.E.]	9 17 6	—	—	76 0 0	0 5 0—Jan. 1864
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	—	—	57 6 0	0 10 0—Mar. 1863
80	Wh. Owles (tin), St. Just, Cornwall	70 0 0	—	—	333 8 0	5 0 0—Nov. 1863
396	Wheal Seton (tin), cop., Camborne	58 10 0	—	—	166 15 0	4 0 0—Feb. 1864
1040	Wh. Trevelyan (id.), Liskeard [S.E.]	6 17 0	—	—	49 0 0	0 15 0—Feb. 1864
2044	Wheal Tremayne (tin), Gwennap	6 11 3	—	—	0 15 0	0 5 0—Nov. 1863
7000	Wicklow (cop.), Liskeard	2 10 0	—	—	11 5 0	1 0 0—Nov. 1863

[* Dividends paid every two months. † Dividends paid every three months.]

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

240	Boscan (tin), St. Just	20 10 0	—	—	36 10 0	1 0 0—Mar. 1862
1600	Carn Brecon (tin), Hlogan	5 0 0	—	—	278 10 0	2 0 0—Feb. 1863
3000	Chiverton (lead), Perranzabuloe [S.]	5 0 0	—	—	85 0 0	2 0 0—June, 1863
256	Condurow (cop., tin), Camborne	35 0 0	—	—	1 7 0	0 7 0—May, 1862
2450	Copper Kitchen (cop.), Hlogan	17 15 0	—	—	2 7 0	—Sept. 1862
1024	Copper Hill (cop.), Redruth	12 0 0	—	—	7 12 0	0 4 0—July, 1862
1055	Cradock Moor (cop.), St. Cleer	8 0 0	—	—	147 0 0	5 0 0—Jan. 1862
280	Derwent Mines (id., lead), Durham	300 0 0	—	—	0 10 0	0 2 0—Feb. 1863
4076	Devon and Cornwall (cop.), Tavistock	5 16 3	—	—	0 17 0	0 2 0—Jan. 1863
8000	Drygwyn (lead), Wales	12 0 0	—	—	0 10 0	0 2 0—Jan. 1863
3000	Fowey Consols (cop.), Tavistock	4 0 0	—	—	0 10 0	0 2 0—Jan. 1863
6000	Great South Tolgus [S.E.], Redruth	0 14 6	—	—	7 13 0	0 5 0—Dec. 1861
10240	Gunnels Lake (Clitters' Adit)	0 2 0	—	—	0 3 0	0 1 0—Mar. 1862
6000	Kelly Bray (lead, cop.), Callington	4 15 6	—	—	0 6 0	0 2 0—Feb. 1860
160	Levant (cop., tin), St. Just	2 10 0	—	—	1091 0 0	5 0 0—May, 1860
640	Mount Pleasant (lead), Mold	4 0 0	—	—	18 18 1	0 7 0—Aug. 1862
470	Newtownards Mining Co., Co. Down	50 0 0	—	—	86 0 0	1 0 0—Sept. 1863
5000	Oradell (lead), Flintshire	0 8 0	—	—	0 10 0	0 2 0—Mar. 1862
5000	South Exmouth (lead), Christow	1 5 0	—	—	0 5 0	0 5 0—Dec. 1862
280	Spearne Moor (tin, cop.), St. Just	31 17 0	—	—	9 15 0	1 0 0—June, 1862
572	Trellyn Consols (tin), St. Ives	12 10 0	—	—	7 0 0	0 10 0—Sept. 1860
1000	Trumpet Consols (tin), near Helston	11 10 0	—	—	11 0 0	2 0 0—Mar. 1862
12000	Twelve Apostles Amal. (id.), Wrexham	1 0 0	—	—	—	—
4200	Vigna and Clogau (cop.) [L.]	3 5 0	—	—	4 12 6	1 0 0—Oct. 1862
1024	Wendron Consols (tin), Wendron	15 10 0	—	—	8 15 0	1 0 0—Jan. 1861
60	West Basset (tin), Hlogan [S.E.]	2 0 0	—	—	10 10 0	0 1 0—Jan. 1861
1024	West Caradon (cop.), Liskeard [S.E.]	5 0 0	—	—	101 1 0	0 10 0—Oct. 1862
6400	West Fowey Consols (tin and cop.)	7 10 0	—	—	0 19 0	0 3 0—May, 1862
128	Wheal Buller (cop.), Redruth [S.E.]	10 0 0	—	—	929 0 0	2 0 0—Mar. 1861
128	Wheal Friendship (cop.), Devon	50 0 0	—	—	2400 10 0	5 0 0—Feb. 1861
612	Wheal Jane (silver-lead), Kea	3 10 0	—	—	13 10 0	1 0 0—Mar. 1862
100	Wheal Mary (tin), Lelant	36 2 6	—	—	284 5 0	4 0 0—Mar. 1862

FOREIGN DIVIDEND MINES.

90000	Australian (cop.), S. Australia [S.E.]	7 7 6	—	—	0 1 0	0 1 0—Dec. 1863
2464	Barr Burras (cop.), South Australia	5 0 0	—	—	210 0 0	5 0 0—June, 1863
4000	Central American (silver) [L.]	5 0 0	—	—	4 6 8	0 14 0—Dec. 1863
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	—	—	99 12 0	1 0 0—Jan. 1864
100000	Don Pedro No. Del Rey [L.] [S.E.]	0 10 0	—	—	0 9 0	0 9 0—Dec. 1863
70000	English and Australian [S.E.]	5 0 0	—	—	1 10 0	0 2 0—Feb. 1864
18000	Fortuna (lead), Spain [L.]	10 0 0	—	—	7 1/2 per cent.	—Yearly.
20000	Fortuna (lead), Spain [L.]	10 0 0	—	—	19 15 0	0 10 0—June, 1863
28000	Gen. Mining Assoc., Nova Scotia [S.E.]	320 0 0	—	—	0 11 0	0 1 0—Jan. 1864
68000	Kapunda Mining Co., Australia [S.E.]	1 0 0	—	—	9 11 2	0 5 0—Oct. 1863
18000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	—	—	1 7 3	0 7 0—Jan. 1864
10000	Portuguese (id., lead), France [S.E.]	320 0 0	—	—	0 9 0	0 1 0—July, 1863
100000	Port Phillip (cop.), Clunes [S.E.]	1 0 0	—	—	61 5 0	3 0 0—Dec. 1863
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	—	—	2 0 0	0 7 0—May, 1863
43174	Unit. Mexican (id.), Mexico [S.E.]	25 0 0	—	—	0 5 0	0 5 0—Nov. 1863
30000	Vancouver (cop.), [L.]	5 0 0	—	—	0 7 0	0 5 0—Nov. 1863
90000	West Canada Mining Company [L.]	1 0 0	—	—	0 5 0	0 5 0—Nov. 1863
45000	Yadana Mutana (cop.), S. A. [L.] [S.E.]	3 0 0	—	—	0 5 0	0 5 0—Nov. 1863

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Alten and Quenangen Uni. (cop.) [L.] [S.E.]	10 0 0	—	—	4 5 0	0 15 0—Nov. 1862
10000	Copago Mining Company, Chili [S.E.]	16 0 0	—	—	6 18 0	0 10 0—Nov. 1862
10000	Gr. Barrier Land, Min. & Co. [L.] [S.E.]	10 0 0	—	—	15 per cent.	—May, 1863
10000	Lustaniana (of Portugal) [S.E.]	2 0 0	—	—	0 19 0	0 1 0—Feb. 1862
10815	Mariquita and New Granada [S.E.]	1 0 0	—	—	0 9 0	0 1 0—July, 1863

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
100000	Anglo-Brazilian (gold) [L.] [S.E.]	0 5 0	—	—	—Dec. 1863
25000	Alamillos (lead), Spain [L.]	0 10 0	—	—	—Oct. 1863
20000	Bearit Tin Streaming Company [L.]	0 17 6	—	—	—Fully paid.
75000	Barr Accord, South Australia (cop.) [L.] [S.E.]	1 0 0	—	—	—Fully paid.
15000	Cape Copper Mining Company [L.] [S.E.]	0 15 0	—	—	—Fully paid.
25000	Capula (silver), Mexico [L.] [S.E.]	0 15 0	—	—	—Fully paid.
17000	Central Italian (cop.) [7000 £ paid]	0 6 0	—	—	—Jan. 1863
60000	Clarendon Consols (cop.), Jamaica [S.E.]	1 2 0	—	—	—July, 1862
10000	Copago Smelting [L.], Chili	10 0 0	—	—	—Fully paid.
70000	Dun Mountain (cop.), New Zealand [L.] [S.E.]	1 0 0	—	—	—Fully paid.
25000	East del Rey (gold), Brazil [L.] [S.E.]	1 0 0	—	—	—Oct. 1863
30000	East Kongsberg Native Silver Mining Co. of Norway [L.]	1 12 0	—	—	—Dec. 1863
20000	Elbe Colliery Company, Bohemia [L.]	1 0 0	—	—	—Fully paid.
50000	Ellerslie and Bardsley (cop.), Jamaica	0 15 0	—	—	—July, 1863
8000	English and Canadian Mining Company [L.]	5 0 0	—	—	—Fully paid.
40000	Fortuna (cop.), West Australia [L.]	2 0 0	—	—	—Fully paid.
80000	Great Northern (cop.), South Australia [L.] [S.E.]	1 10 0	—	—	—June, 1862
24000	Hindostan (cop.), Bengal [L.]	3 0 0	—	—	—Feb. 1863
4000	Hove Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	—	—	—Fully paid.
10000	Kapunda Mining Company [L.]	1 0 0	—	—	—Fully paid.
30000	Lagunazo (sulphur cop.), Fortuna [L.]	1 0 0	—	—	—Fully paid.
100000	Montes Aurores (gold), Brazil [L.] [S.E.]	2 0 0	—	—	—Fully paid.
3000	New Barras (cop.) (Australia)	5 0 0	—	—	—Aug. 1862
60000	New Granada (gold), South America [S.E.]	1 0 0	—	—	—Fully paid.
10000	New Grand Duchy of Baden (silver-lead), near Freiberg	1 0 0	—	—	—Nov. 1863
60000	North Rhine Copper of South Australia [L.] [S.E.]	0 17 6	—	—	—Fully paid.
50000	Nova Scotia (lead and gold) [L.] [S.E.]	1 0 0	—	—	—Nov. 1862
15000	Pachusa Silver Mining Company, Mexico [L.]	0 15 0	—	—	—Nov. 1863
50000	Panichillo (cop.) [L.] [S.E.]	1 0 0	—	—	—Fully paid.
6000	Pel River Land and Mineral [Limited]	100 0 0	—	—	—Stock.
23000	Quebrada (cop.), Venezuela [L.] [S.E.]	4 10 0	—	—	—Jan. 1864
10000	San Roque (lead), Spain	5 0 0	—	—	—Fully paid.
60000	Santa Barbara (gold), Brazil [L.] [S.E.]	0 10 0	—	—	—Mar. 1862
120000	Scottish European Mining Company [L.]	0 15 0	—	—	—May, 1863
15000	South Europe Mining Company, Spain [L.] [S.E.]	3 0 0	—	—	—May, 1860